

**No. 24-2077 (L)**  
**UNITED STATES COURT OF APPEALS**  
**FOR THE FOURTH CIRCUIT**

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THE COURTLAND COMPANY, a West Virginia Business Corporation,

Plaintiff – Appellant,

v.

UNION CARBIDE CORPORATION, a New York Corporation,

Defendant – Appellee,

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Appeal from the U.S. District Court for the Southern District of West Virginia  
John T. Copenhaver, Jr., Senior U.S. District Judge  
Civil Action Nos. 2:19-00894, 2:21-00487

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**OPENING BRIEF OF APPELLANT, THE COURTLAND COMPANY**

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NEELY & CALLAGHAN  
Michael O. Callaghan  
WV Bar No. 5509  
1337 Virginia Street East, Suite 200  
Charleston, WV 25301-3011  
(304) 343-6500  
mcallaghan@neelycallaghan.com  
Counsel for Appellants

LAW OFFICES OF MICHAEL C. DONOVAN  
Michael C. Donovan  
CA Bar No. 153855  
650 Castro Street, No. 120-413  
Mountain View, CA 94041-2055  
(415) 735-7441  
mcd@legal-recoveries.com  
Counsel for Appellants

PALADIN LAW GROUP, LLP<sup>®</sup>

John R. Till

CA Bar No. 178763

Kirk M. Tracy

CA Bar No. 288508

1176 Boulevard Way

Walnut Creek, CA 94595

(925) 947-5700

[jtill@paladinlaw.com](mailto:jtill@paladinlaw.com)

[ktracy@paladinlaw.com](mailto:ktracy@paladinlaw.com)

Counsel for Appellant

**TABLE OF CONTENTS**

TABLE OF CONTENTS .....3

TABLE OF AUTHORITIES.....8

I. INTRODUCTION & SUMMARY OF ARGUMENT:.....11

    A. Summary of Argument .....13

II. JURISDICTIONAL STATEMENT:.....15

III. STATEMENT OF ISSUES: .....16

IV. STATEMENT OF THE CASE:.....18

    A. Overview: The Parties & the Claims at Issue .....18

    B. Procedural History.....18

    C. Facts.....19

        1. Operational History of the Filmont Open Dump.....19

        2. Environmental Monitoring & Sampling by UCC .....21

        3. September 2020 Sampling of Ward Branch by Dr. Simonton.....23

        4. June/July 2021 Sampling on Courtland by Dr. Simonton .....23

        5. Open Dumping.....24

        6. Clean Water Act: Point Sources.....24

        7. Clean Water Act: Discharges .....25

    D. Conclusions of Law.....28

        1. CERCLA Claims.....28

        2. RCRA Claims .....31

        3. Pubic Nuisance Per Se Claim .....33

4. Pubic Nuisance Claim.....34

5. Clean Water Act Claims.....34

V. STANDARD OF REVIEW: .....35

VI. ARGUMENT: .....36

A. Courtland II: The District Court erred as a matter of law by granting judgment for less than all of Plaintiff’s response costs under CERCLA. ....36

B. Courtland II: The District Court erred as a matter of law by finding Courtland liable for contribution to UCC under CERCLA § 113, and erred in its equitable allocation by allocating 25% of past and future response costs to Appellant. ....40

1. UCC Failed to Demonstrate the there is a “Single Indivisible Harm for Which There is no Reasonable Basis of Apportionment” at the Courtland Property. ....41

2. The District Court Clearly Erred in its Equitable Allocation. ....44

C. Courtland II: The District Court erred as a matter of law by holding that Courtland failed to prove that the Filmont open dump caused it a special injury and failed to show any harm to the general public in need of abatement, thus factoring against the issuance of a permanent injunction for the RCRA Open Dump.....45

D. Courtland II: The District Court erred in its holding that Courtland failed to establish, in support of its public nuisance claim, any harm to the general public in need of abatement as a result of any contamination emanating from Filmont and Massey and that Courtland also failed to demonstrate a “serious injury” to its property. ....49



E. Courtland II: The District Court Committed Plain Legal Error by Holding: (1) Filmont is Not an “Open Dump” Under the W. Va. Solid Waste Management Act (“WVSWMA”), W. Va. Code § 2-15-10(a); and (2) the Open Dumping Provisions of the W. Va. Solid Waste Management Rule that Have Been in Effect for More than Two (2) Decades Are “Hopelessly in Conflict with the WVSWMA” and, Therefore, Unenforceable.....51

1. Contrary to the District Court’s holding, the Use of the Defined Term “Solid Waste Disposal” in the Definition of the term “Open Dump” in WVSWMA § 2 Applies Equally to Solid Waste Disposed at Facilities that Are Actively Conducting Disposal Operations at the Time of the Enactment of the WVSWMA and to Solid Wastes at “Closed” or “Inactive” Facility at which All Disposal Operations Were Terminated Prior to the Enactment of the WVSWAMA .....53

2. Wholly without Regard to When any Solid Waste Was Disposed of in W. Va., the Open Dumping provisions of WVSWMA §§ 2 and 10(a), W. Va. Code § 22-15-2 and 10(a), Prohibit: (1) Any “Solid Waste Disposal” that Is “in Violation of W. Va. Law;” and (2) Any Site or Location Where Solid Waste “Is Disposed” in a Manner that Does Not Protect the Environment. ...60

3. The District Court’s Holding that the Applicability Section of the WVSWMR Excuses UCC’s Filmont Dump from Any Legal Need to Comply with the WVSWMR Is in Every Regard Clear and Plain Legal Error and Should Be Reversed by this Court. ....64

4. The District Court’s Holding First Made Now More than 40 years after the Initial Promulgation of the WVSWMR and More than 26 Years After Its Last Repromulgation in 1996 that the WVSWMR Is “Hopelessly in Conflict”

with the WVSWMA and Is Unenforceable Is Plain and Clear Legal Error  
Requiring Reversal by this Court.....67

5. Contrary to the District Court’s holding, UCC’s Filmont Dump Is  
Undeniably a Per-Se Public Nuisance under W. Va. Law Because It Is a  
Prohibited Open Dump under WVSWMR §§ 1.6 and 7.2 and, Therefore, an  
Instance of the “Improper – because It Is in this Instance Illegal – Disposal of  
Solid Waste” Expressly Declared to Be a Public Nuisance by the W. Va.  
Legislature in WVSWMA § 1(c)(1). .....71

F. Courtland II: The District Court erred concluding that the West Virginia  
Voluntary Remediation Program is sufficient under RCRA to remedy the  
Filmont “Open Dump” without the Court entering an injunctive order. ....73

G. Courtland IV: The District Court erred in concluding that Appellant did  
not adduce evidence of stormwater discharges which actually have occurred  
from Filmont and Massey in the Northern Boundary Ditch. ....78

H. Courtland IV: The District Court erred in its application of Civil Penalties  
for Union Carbide’s failure to obtain a permit under the Clean Water Act by only  
counting days of actual observed stormwater runoff instead of known days of  
stormwater runoff and abused its discretion by excluding certain evidence. ....80

1. UCC was in violation of the Clean Water Act every day it operated its  
facilities without a stormwater permit. ....81

2. Common sense as with NBD—clear error and abuse of discretion to  
limit to just days testified to.....86

3. The District Court abused its discretion in excluding rainfall evidence  
from Trial Phase II. ....87

VII. CONCLUSION: .....90

REQUEST FOR ORAL ARGUMENT.....91

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMIT .....92

## TABLE OF AUTHORITIES

### Cases

<i>Barker v. Naik</i> , No. 2:17-cv-04387, 2018 U.S. Dist. LEXIS 135289, at *6 (S.D. W. Va. Aug. 10, 2018) .....	50
<i>Boeing Co. v. Cascade Corp.</i> , 207 F.3d 1177 (9th Cir. 2000) .....	41
<i>Burlington N. &amp; Santa Fe Ry. v. United States</i> , 556 U.S. 599 (2009) .....	41, 42
<i>Carson Harbor Vill., Ltd. v. Unocal Corp.</i> , 270 F.3d 863 (9th Cir. 2001) .....	38, 40
<i>Chesapeake Bay Found. v. Gwaltney of Smithfield</i> , 844 F.2d 170 (4th Cir. 1988) ..	83
<i>City of Portland v. Boeing Co.</i> , 179 F. Supp. 2d 1190 (D. Or. 2001) .....	49
<i>City of Portland v. Monsanto Co.</i> , No. 3:16-cv-01418-PK, 2017 U.S. Dist. LEXIS 156370, at *5 (D. Or. Sep. 22, 2017) .....	48, 50
<i>Corradetti v. Sanitary Landfill, Inc.</i> , 912 F. Supp. 2d 156 (D.N.J. 2012) .....	49
<i>Duff v. Morgantown Energy Ass’n</i> , 187 W. Va. 712, 421 S.E.2d 253 (1992) .....	50
<i>Hark v. Mountain Fork Lumber Co.</i> , 127 W. Va. 586, 34 S.E.2d 348 (W. Va. 1945) .....	50
<i>Huskey v. Ethicon, Inc.</i> , 848 F.3d 151 (4th Cir. 2017) .....	36
<i>Lincoln Props. v. Higgins</i> , CIV. No. S-91-760 DFL/GGH, 1993 U.S. Dist. LEXIS 1251 (E.D. Cal. Jan. 18, 1993) .....	78
<i>Living Lands, LLC v. Cline</i> , 591 F. Supp. 3d 79 (S.D. WV 2022) .....	56
<i>Mangini v. Aerojet-General Corp.</i> , 230 Cal. App. 3d 1125 (1991) .....	49, 50
<i>Molokai Chamber of Commerce v. Kukui (Molokai), Inc.</i> , 891 F. Supp. 1389 (D. Haw. 1995) .....	82, 83, 85
<i>New Mexico v. GE</i> , 335 F. Supp. 2d 1185 (D.N.M. 2004) .....	49, 50
<i>PCS Nitrogen Inc. v. Ashley II of Charleston LLC</i> , 714 F.3d 161 (4th Cir. 2013) ..	41
<i>Plasterers’ Local Union No. 96 Pension Plan v. Pepper</i> , 663 F.3d 210 (4th Cir. MD 2011) .....	35

<i>Puget Soundkeeper Alliance v. Whitley Mfg.</i> , 145 F. Supp. 3d 1054 (W.D. Wa. 2015).....	82
<i>Territory of Guam v. United States</i> , 593 U.S. 310 (2021) .....	41
<i>TFWS, Inc. v. Franchot</i> , 572 F.3d 186 (4th Cir. MD 2009).....	35
<i>Tosco Corp. v. Koch Industries, Inc.</i> , 216 F.3d 886 (10th Cir. 2000) .....	49
<i>United States ex rel. Drakeford v. Tuomey</i> , 792 F.3d 364 (4th Cir. 2015).....	36
<i>United States v. Lighty</i> , 616 F.3d 321 (4th Cir. 2010).....	35
<i>United States v. Young</i> , 248 F.3d 260, 266 (4th Cir. 2001) .....	36
<i>Universal Furniture Int'l, Inc. v. Collezione Europa USA, Inc.</i> , 618 F.3d 417 (4th Cir. NC 2010) .....	35
<i>Utility Solid Waste Activities Group v. Environmental Protection Agency</i> , 901 F.3d 414 (D.C. Cir. 2018).....	62, 63
<i>Von Duprin LLC v. Major Holdings, LLC</i> , 12 F.4th 751 (7th Cir. 2021).....	39
<i>Waltman v. King William Cty. Sch. Bd.</i> , Civil Action No. 3:10CV72-HEH, 2010 U.S. Dist. LEXIS 24093 (E.D. Va. Mar. 16, 2010).....	83

## Statutes

28 U.S.C. § 1331 .....	15
33 U.S.C. § 1342 .....	82
42 U.S.C. § 6903 .....	61
42 U.S.C. § 6945 .....	75, 77
42 U.S.C. § 6972 .....	75, 77
42 U.S.C. § 9613(b) .....	15
RCRA § 1003, 42 U.S.C. § 6902 .....	55
W. Va Code § 29A-3-11 .....	70
W. Va. Code § 22-15-2 .....	54

**Regulations**

40 C.F.R. § 239.12 .....70

40 C.F.R. § 256.23 ..... 56, 75

W. Va. C.S.R. § 33-1-1 ..... 66, 68

W. Va. C.S.R. § 33-1-2..... 65, 66, 67, 70

## I. INTRODUCTION & SUMMARY OF ARGUMENT:

This appeal concerns toxic contamination at and emanating from defendant Union Carbide Corporation’s (“UCC”) facilities in South Charleston West Virginia, which threatened to impact and has adversely impacted Appellant-Plaintiff, The Courtland Company’s (“Courtland”) adjacent real property and has adversely impacted adjacent Waters of the State and Waters of the United States. The four cases filed are referenced as Courtland I (No. 2:18-cv-1230), Courtland II (No. 2:19-cv-894), Courtland III (No. 2:21-cv-101), and Courtland IV (No. 2:21-cv-487).

Courtland filed Courtland II on December 13, 2019, concerning claims under RCRA,<sup>1</sup> CERCLA,<sup>2</sup> and state law claims against UCC concerning its Filmont and Massey Railyard (“Massey”) facilities, which share the northern border of Courtland’s property. Courtland filed separate CWA matters Courtland III (February 9, 2021) and Courtland IV (September 1, 2021) against UCC. In a “Phased” trial, the issue of liability for all causes of action in all four matters were tried (the “Phase I trial”). A Memorandum and Opinion Order was issued September 28, 2023 (“2023 Order”), with final judgment in Courtland I and Courtland III. Plaintiff separately appealed those judgments to this Court and are awaiting oral argument scheduling.

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<sup>1</sup> The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as further amended (“RCRA”), 42 U.S.C. §§ 6901-6992k.

<sup>2</sup> The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (“CERCLA”), 42 U.S.C. §§ 9601-9675.

The District Court held in Courtland II that UCC's Filmont waste disposal facility is a prohibited "Open Dump" under RCRA § 4005(a), 42 U.S.C. § 6945(a), and held in Courtland IV that UCC is violating the CWA by discharges of "stormwater associated with industrial activity" without the required permit from Filmont and Massey to the Southern Boundary Ditch (located between UCC's Filmont and Massey and Courtland's property). JA1040-JA1043 ("2023 Order").

The District Court held a further trial for Courtland II and IV to address remedy and civil penalty matters for those violations (the "Phase II trial").<sup>3</sup> Courtland disputes the District Court's rulings on certain pretrial motions improperly that limited scope of evidence presented at Phase II trial.

On September 27, 2024, a Memorandum and Opinion Order was issued ("2024 Order"), and final judgment in Courtland II and Courtland IV. The District Court issued a variety of rulings as to each party's liability under CERCLA for responses costs and contribution, the appropriate remedy for the RCRA Subtitle D RCRA Open Dump found to exist, and Courtland's Public Nuisance and CWA claims, including assessments of civil penalties to UCC for unpermitted discharges of stormwater

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<sup>3</sup> **Courtland IV Standing Appeal:** Courtland will not burden this Court with repeating its standing arguments set forth in the Courtland III here in Courtland IV, but hereby incorporates its standing arguments at Courtland III (No. 23-2143(L), Dkt. No. 36, Appellant's Opening Brief, at 58-68) herein as if set forth in full.



associated with industrial activity. Courtland appeals multiple of the District Court's holdings, as follows.

### **A. Summary of Argument**

**In Courtland II**, the District Court erred as a matter of law by granting judgment for less than all of Plaintiff's response costs under CERCLA. This holding is erroneous because evaluation of the site, including the property that is the source of contamination, is informative of a proper investigation and remedy selection, and constitutes "necessary" costs of response under CERCLA.

The District Court also erred as a matter of law by finding Courtland liable for 25% contribution to UCC for Courtland's response costs under CERCLA for which UCC is otherwise liable. This holding is erroneous because the District Court never found a "single indivisible harm for which there is no reasonable basis of apportionment," a threshold requirement before assigning liability under a CERCLA contribution claim.

Additionally, the District Court erred as a matter of law by holding that Courtland failed to prove that the Filmont open dump caused it a special injury and failed to show any harm to the general public in need of abatement, thus factoring against the issuance of a permanent injunction for the RCRA Open Dump and against finding UCC liable for abatement of a public nuisance.

The District Court also erred by holding that the Appellant failed to prove that the Filmont dump is a Public Nuisance *per se*, and finding that the Filmont dump is not an “open dump” in violation of the West Virginia Solid Waste Management Act, W. Va. Code § 22-15-1 *et seq.* The District Court incorrectly interpreted the state Solid Waste Management Rules to be not applicable to Filmont on the one hand and also found the rules to be “hopelessly” in conflict with the W. Va. Solid Waste Management Act on the other. The District Court’s incorrect interpretation erroneously concluded that the act and corresponding rules, that otherwise would require UCC to affirmative action to remedy the open dump and public nuisance *per se*, do not cover facilities where this is only “passive migration” of contamination such as leaking, discharging, or leaching. This holding is in direct conflict with federally mandated “minimum requirements” under RCRA Subtitle D for a “Participating State’s” solid waste management program.

Further, the District Court erred concluding that the West Virginia Voluntary Remediation Program (“VRP”) is sufficient under RCRA to remedy the Filmont “Open Dump” without the Court entering an injunctive order, despite acknowledging many ways in which the VRP differs from the appropriate remedy under CERCLA and the NCP. Among those differences is the fact that waste will remain within groundwater after completion of the VRP. Such a remedy is insufficient as a matter of law.

**In Courtland IV**, the District Court erred as a matter of law by holding that Plaintiff, as a “private attorney general” under the “Citizen Suit” provisions of the Clean Water Act, failed to demonstrate that it, as an adjacent property owner, has standing with respect to UCC’s unpermitted discharges of “stormwater associated with industrial activity” from the Filmont Open Dump into the Northern Boundary Ditch and Ward Branch Seep.

The District Court also erred as a matter of law in concluding that Courtland did not adduce evidence of actual stormwater discharges that have occurred from Filmont and Massey in the Northern Boundary Ditch and, similarly, adduced only one day’s worth of such evidence with respect to the Southern Boundary Ditch.

Additionally, the District Court improperly narrowed the scope of trial Phase II and excluded evidence of historic rainfall data and accompanying expert testimony as to resulting historical discharges of stormwater.

## **II. JURISDICTIONAL STATEMENT:**

The District Court has exclusive original jurisdiction over the claims arising under CERCLA pursuant to CERCLA § 113(b), 42 U.S.C. § 9613(b), original jurisdiction under RCRA pursuant to RCRA § 7002(a), 42 U.S.C. § 6972(a), and original jurisdiction over the subject matter of the claims arising under the CWA § 505(a), 33 U.S.C. § 1365(a), because those claims arise under federal law. *See* 28 U.S.C. § 1331; JA0053, JA1448. And this Court has appellate jurisdiction over these

actions because the District Court directed entry of a final Judgment that disposes of all parties' claims, partly in Appellee Union Carbide Corporation's favor, and Appellant timely filed a Notice of Appeal from that Judgment. JA1409-JA1412, JA2939-JA2941.

### **III. STATEMENT OF ISSUES:**

#### **COURTLAND II**

1. Whether the District Court erred as a matter of law in granting judgment for less than all of Plaintiff's response costs by holding that the costs associated with the September 2020 kayak trip/sampling in Ward Branch ultimately do not constitute "necessary" costs of response under CERCLA.

2. Whether the District Court erred as a matter of law by finding Courtland liable for contribution to UCC under CERCLA § 113 and erred in its equitable allocation by allocating 25% of past and future response costs to Appellant.

3. Whether the District Court erred as a matter of law by holding that Courtland failed to prove that the Filmont open dump caused it a special injury and failed to show any harm to the general public in need of abatement, with respect to the need for injunctive relief pursuant to the Court's finding that Filmont is an Open Dump.

4. Whether the District Court erred as a matter of law in its holding that Courtland failed to establish, in support of its public nuisance claim, any harm to the

general public in need of abatement as a result of any contamination emanating from Filmont and Massey and that Courtland also failed to demonstrate a “serious injury” to its property.

5. Whether the District Court erred as a matter of law by concluding that the Appellant failed to prove that the Filmont dump is a Public Nuisance *per se*, including whether the District Court erred in finding that the Filmont dump is not an “open dump” in violation of the West Virginia Solid Waste Management Act, W. Va. Code § 22-15-1 *et seq.*

6. Whether the District Court erred as a matter of law by concluding that the West Virginia Voluntary Remediation Program is sufficient under RCRA Subtitle D to remedy the Filmont “Open Dump” without the Court entering an injunctive order.

#### **COURTLAND IV**

7. Whether the District Court erred in concluding that Appellant did not adduce evidence of stormwater discharges which actually have occurred from Filmont and Massey in the Northern Boundary Ditch.

8. Whether the District Court erred as a matter of law in its application of Civil Penalties for Union Carbide’s failure to obtain a permit under the Clean Water Act by only counting days of actual observed stormwater runoff instead of known days of stormwater runoff and abused its discretion by excluding certain evidence.

#### **IV. STATEMENT OF THE CASE:**

##### **A. Overview: The Parties & the Claims at Issue**

Courtland is a West Virginia business corporation owning a 13.8-acre parcel of undeveloped land (the “Courtland Property”) in South Charleston, which it purchased on January 7, 1980. JA0641. UCC is a New York corporation owning the properties at issue herein. The properties at issue, known as UCC’s Filmont Landfill (“Filmont”) and UCC’s Massey Railyard (sometimes “Massey”), are two separate sites located on the same parcel of land, which UCC acquired in 1946. JA0641.

The Southern Drainage Ditch (“South Boundary Ditch”) runs between the Courtland Property and Filmont and Massey, and is a tributary of Davis Creek. JA0643. The Northern Drainage Ditch (“North Boundary Ditch”), on the northernly side of Filmont and Massey, is a tributary of Ward Branch, which is a tributary of Davis Creek.

##### **B. Procedural History**

Following a Phased Trial on liability issues for all causes of action, on September 28, 2023, the District Court issued a 416-page Memorandum Opinion and Order (JA0637, JA2115) and Judgment in Courtland I and III was entered same day.

Prior to the Phase II trial, the parties filed competing motions in limine to exclude certain evidence from presentation at trial. JA2557-JA2558, JA2856-JA2857, JA5760-JA5762. Courtland contends that the District Court effectively pulled a “bait and switch” by improperly narrowing the scope of discovery and evidence it deemed admissible for trial Phase II as compared to what it had suggested would be the case throughout trial Phase I, including the exclusion from Phase II of evidence to demonstrate the number of days of unpermitted stormwater runoff at the site, as discussed below.

The remaining issues in Courtland II and IV were tried and on September 27, 2024, the District Court issued a Memorandum Opinion and Order (JA1330, JA2860) and Judgment in Courtland II and Courtland IV was entered same day (JA1409, JA2938).

Twenty-nine days later, on October 25, 2024, Plaintiff filed a Notice of Appeal from that Judgment. JA1412, JA2941.

## **C. Facts**

### ***1. Operational History of the Filmont Open Dump***

UCC’s Filmont facility began operations as a landfill in approximately 1950 until its “closure”<sup>4</sup> in 1987. UCC’s Filmont waste disposal facility is one large,

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<sup>4</sup> Courtland disputes the District Court’s findings and conclusions regarding the alleged “closure” of Filmont, but those findings and conclusions are not at issue in the present appeal.

unlined hole in the ground with no constructed landfill internal “cells,” which does not now have and never has had any manmade liner of any kind, any leachate collection system, or any leachate monitoring or detection system. JA0697-JA0698.

For several decades during its early active life, Filmont was associated with and operated as a waste disposal landfill for UCC’s South Charleston Plant (“SCP”), which is a large petrochemical manufacturing facility that was and is a major generator of hazardous wastes. JA0699. Some hazardous waste was disposed of at Filmont during its early operations from approximately 1950 to the early 1970s. JA0701, JA0703-JA0704.

Despite its purported “closure” in 1987, there is evidence indicating that UCC disposed of unpermitted wastes at Filmont. Such wastes included all process industrial wastewater from the SCP in the 1970s. JA0706. That waste included multiple priority pollutants identified by the USEPA. JA0707-JA0709.

The District Court found that Filmont was closed in 1987 prior to the expiration of Filmont’s state Department of Health permit in accordance with such permit. JA0716. As the alleged permit was not produced at trial, or otherwise, the actual terms and conditions of the alleged permit are unknown. No testimony was provided as to the terms and conditions—only testimony that people believed there was a permit. Without the permit or testimony regarding the terms and conditions of the permit, there was no basis for the Court to determine that UCC complied with its



alleged permit. Likewise, the District Court found that UCC submitted a CERCLA 103(c) Notice which finding was against the overwhelming weight of the evidence. JA0721. The evidence admitted on this issue was a June 9, 1981, cover letter seemingly enclosing the CERCLA 103(c) Notice respecting Filmont signed by F.M. Charles, UCC's Corporate Director of Environmental Affairs. JA0720-0721. No one testified to actually sending the letter and no evidence, such as a return receipt card or EPA listing the site, was produced at trial. To the contrary, EPA's response to a Freedom of Information request was a statement that no documents existed regarding Filmont, including no 103 Notice. JA0721, n.31. Moreover, EPA has long since before 1981 maintained a database of facilities containing hazardous waste, such as Filmont. Every facility, including many UCC facilities, has an EPA Identification Number. No such number was issued for Filmont based upon the purported 1981 submission nor was an EPA number ever issued based upon a submission by UCC. As the District Court found, Filmont contains Hazardous Waste, it would have been assigned a number had UCC actually reported Filmont to EPA. This was no mistake by UCC, one of the most sophisticated chemical manufacturing companies in the world well versed in environmental compliance.

## ***2. Environmental Monitoring & Sampling by UCC***

Beginning in 2005 and continuing until 2019, UCC, acting on its own accord and without any notice to or any oversight by either USEPA or the West Virginia

Department of Environmental Protection (“WVDEP”), conducted monitoring and sampling of groundwater, surface water, and soil at and near Filmont and Massey.

It is evident from the data collected by UCC over the years that hazardous substances have been released from the Filmont facility and have migrated into the environment as evidenced by the presence of the same in the groundwater monitoring wells located on Filmont and the western side of Davis Creek on land owned by the city of South Charleston. JA0725-JA0726.

It is undisputed that the groundwater in the Filmont alluvial groundwater formation is hydrologically connected and discharges to Davis Creek. The saturated landfill material is the waste located above the partial clay layer of the landfill that sits saturated in the Filmont groundwater. On January 29, 2021 (years after Courtland commenced its Courtland II RCRA and CWA federal “Citizen Suit” actions against UCC regarding its Filmont Facility), UCC applied for Filmont and Massey (collectively “the site”) to be accepted into the West Virginia DEP’s Voluntary Remediation Program (“VRP”).

A plume of groundwater contamination from Filmont continues to exist in the environment. JA0738-JA0739.

### ***3. September 2020 Sampling of Ward Branch by Dr. Simonton***

Dr. Simonton (Courtland's environmental expert) took a kayak trip on September 11, 2020, to observe the Filmont site and its potential impacts on Davis Creek and Ward Branch. JA0739.

Dr. Simonton took three grab samples on his kayak expedition: two of surface water and one of sediment in or near Ward Branch not far from the point at which Ward Branch turns west to Davis Creek after crossing under I-64 in a culvert. The samples revealed the presence of various metals and hazardous substance. JA0740-JA0743.

On September 12, 2020, the day after the kayak trip, Dr. Simonton conducted a field observation of Davis Creek from the Courtland Property at which Southern Boundary Ditch enters Davis Creek from the Courtland Property. The field observation revealed the presence of orange iron hydroxide deposits, in Southern Boundary Ditch where it meets Davis Creek. JA0744-JA0745.

### ***4. June/July 2021 Sampling on Courtland by Dr. Simonton***

Dr. Simonton conducted in June and July 2021, a limited investigation on the northern portion of the Courtland Property, lying between the Southern Boundary Ditch and the property line with Filmont but near the property line. A total of \$27,142.50 was expended by Courtland on this preliminary groundwater investigation. JA0749.

The groundwater samples taken from the first three wells revealed the presence of three VOCs and eight SVOCs, as well as fifteen metals, including arsenic, 1,4 dioxane, and bis (2-chloroisolpropyl) ether. JA0750- JA0752. All three of these are CERCLA hazardous substances. JA0753. Each of these three substances have likewise been detected in groundwater monitoring wells at Filmont and/or Massey. JA0761-JA0762.

## ***5. Open Dumping***

### **a. Groundwater**

With respect to Courtland's open dumping claims, the District Court found that arsenic -- identified as one of the prominent constituents of concern -- has been detected in the Filmont groundwater plume beyond the landfill boundary as evidenced by the detections thereof in the monitoring wells on the western side of Davis Creek. JA0773-JA0774.

The District Court found that the primary source of the arsenic detected in the Filmont groundwater plume, which includes MW-12 on the western side of Davis Creek, is more likely than not the solid waste disposed of in the landfill, which has leached therefrom. JA0776.

## ***6. Clean Water Act: Point Sources***

Courtland alleged that UCC is discharging pollutants into navigable waters from what it contends to be three principal point sources: the South Boundary Ditch,

the North Boundary Ditch, and a seep (the “Ward Branch Seep”). Each of the three is alleged to be discharging seeping groundwater containing numerous pollutants into waters of the United States, while the South Boundary Ditch and the North Boundary Ditch are also alleged to be discharging “stormwater associated with industrial activity.” JA2443. All three are relevant to this appeal.

**a. Southern Boundary Ditch**

The Southern Boundary Ditch is a man-made feature, which is a ditch and that is a discernible, confined, and discrete conveyance that constitutes a point source that receives stormwater from two Massey Culverts and flowing off Filmont and channeled toward the Southern Boundary Ditch as well as the seeps into the ditch at an area not far from the terminus of the ditch at Davis Creek. JA2446-JA2447.

**b. North Boundary Ditch**

The District Court found that the North Boundary Ditch is “a drainage feature, which fairly may be described as a ditch” and “is a point source inasmuch as it functions as a discernible, confined and discrete conveyance of certain pollutants from Filmont into Ward Branch.” JA2450-JA2451.

**7. *Clean Water Act: Discharges***

**a. Southern Boundary Ditch**

One of the sources of water to the Southern Boundary Ditch is stormwater associated with industrial activity from both Filmont and Massey. JA2475-JA2476.

The District Court found “that stormwater did discharge from Filmont on the

occasion testified to by Dr. Simonton, and is apt to do so on a continuing basis by which it is channeled into the Southern Boundary Ditch from which it empties into Davis Creek. Courtland [] thus proved an **ongoing violation** of the [Clean Water] Act.” JA2477-JA2478 (emphasis added).

The court concluded that stormwater has discharged from Massey by way of the two culverts into the Southern Boundary Ditch. The District Court further found, “[i]nasmuch as the two Massey culverts channel stormwater collected on Massey Railyard, which then discharges to the Southern Boundary Ditch and Davis Creek for which UCC presently lacks a Clean Water Act permit, and inasmuch further that such discharges have continued after the date this action was initiated and are likely to recur in the future, the court finds that Courtland has thereby proved an ongoing violation.” JA2479.

#### **b. Northern Boundary Ditch and Ward Branch Seep**

Although the District Court ultimately determined Courtland lacks standing for its CWA “Citizen Suit” claims regarding the ongoing, unpermitted discharge of pollutants occurring at the North Boundary Ditch and the Ward Branch Seep, it first made the following findings of fact:

- Filmont is the source of the seeping along the northern boundary of the landfill. JA2483.

- The substances seeping out of the landfill at each of these three seeps is s leachate. JA2484.
- On March 20, 2022, leachate containing iron seeped from the Eastern Seep at Filmont, entered the Northern Boundary Ditch and flowed into Ward Branch. JA2485.
- UCC discharged pollutants from Filmont into Northern Boundary Ditch in 2005. JA2487.
- Arsenic, barium, iron, selenium, 1,4 dioxane, and bis (2-chloroisopropyl) ether discharged from Filmont to the Northern Boundary Ditch. JA2488-JA2489 (summarizing discharges in 2005, 2007, 2008, and 2011).
- Filmont was the source of pollutants discharging to Ward Branch, via the Ward Branch Seep, on September 12, 2020. Also, the Ward Branch Seep is a source of the pollutants detected at ERM Sample 3 on February 23, 2021. JA2496.
- On September 11, 2020, Filmont discharged, via the Ward Branch Seep, iron, manganese, and aluminum, as well as arsenic, beryllium, cadmium, chromium, copper, lead, nickel, and zinc, and on February 23, 2021, Filmont discharged iron, manganese, and aluminum. JA2497.

- Courtland has shown an **ongoing violation** has occurred after the date the complaints were filed in Courtland III and IV. By the same token, there is a continuing likelihood of intermittent or sporadic discharges of iron, manganese, aluminum, as well as arsenic, beryllium, cadmium, chromium, lead, nickel, and zinc from the **Ward Branch Seep**. Courtland has shown an ongoing violation and there is a continuing likelihood of a recurrence of intermittent or sporadic violations. JA2497-JA2498.

## **D. Conclusions of Law**

### ***1. CERCLA Claims***

Regarding Courtland's claim for recovery of Response Costs under CERCLA section 107(a), the District Court held that

a release or threatened release of hazardous substances has occurred or threatens to occur at the site via leaching, as evidenced by the detections of hazardous substances . . . in the groundwater monitoring wells and groundwater sampling points thereon. . . . Courtland has further established that these same three constituents detected in the groundwater at the site could have travelled onto the northern portion of the Courtland Property where Dr. Simonton's 2021 groundwater sampling point is located and where all three constituents were likewise detected.

JA0848-JA0849.

The Court also found,

that historic and current activities that have occurred and continue to occur on the Courtland Property are more likely than not a contributing source to Courtland's groundwater contamination in the northern portion thereof. Under



CERCLA, however, merely pointing to a plausible alternate or contributing source alone does not foreclose a finding that hazardous substances were released or threatened release from Filmont and Massey absent independent facts that would conclusively disprove causation.

While UCC offered such evidence by way of the expert testimony of Mr. de Haven regarding contamination emanating from the Tech Park to Courtland in the Tech Park phase of the trial, no such evidence was offered with respect to the contamination emanating from Filmont and Massey to Courtland. Indeed, UCC's expert, Mr. MacPherson, merely testified that Courtland could also be a source of the groundwater contamination detected on the Courtland Property, not that Filmont and Massey could not. The court thus concludes that UCC has not met its burden in disproving causation for CERCLA purposes in the Filmont phase of the trial.

JA0849 (citations omitted).

The District Court held that Courtland incurred \$27,142.50 in response costs for preliminary groundwater investigation on the northern portion of the Courtland Property in June and July 2021, which were “necessary costs of response that are consistent with the NCP,” thereby establishing UCC's liability for those costs under CERCLA section 107(a). JA0850. The District Court also phrased its holding as “Courtland's reasonable concern that hazardous substances could have migrated onto the Courtland Property from Filmont and Massey via groundwater . . . .” JA0850. However, unlike the limitation later imposed on Courtland in terms of presenting evidence of number of days of rainfall for imposition of civil penalties under the CWA, the District Court held that, “[s]hould UCC wish to challenge any portion of the \$27,142.50 total, on grounds other than NCP compliance, such as excessiveness, it may do so forthwith in the damages phase of this trial.” JA0850.

On the other hand, the District Court denied Courtland's request for CERCLA cost recovery of its costs incurred by Dr. Simonton related to his September 2020 kayak trip, surface water sampling of Ward Branch, and next day inspection of Davis Creek from the Courtland Property. The District Court concluded that those costs do not constitute necessary costs of response inasmuch as such costs are "wholly unrelated to any concern of Courtland's that contamination could be migrating from Filmont and Massey via the groundwater to the Courtland Property." JA0851.

Regarding Courtland's claim for declaratory relief under CERCLA section 113(g)(2), the District Court held,

Inasmuch as UCC is liable under CERCLA 107(a) for at least some of the groundwater contamination detected on the northern portion of the Courtland Property, declaratory judgment against UCC for any future remediation costs Courtland may choose to incur in efforts to remediate the same is proper. This imposition of future liability does not prevent UCC from challenging any actual future costs incurred by Courtland as unnecessary, inconsistent with the NCP, or unreasonable. Nor does it preclude UCC from seeking an equitable allocation of such costs from Courtland.

JA0851.

The District Court further ruled, with respect to UCC's contribution claim under CERCLA section 113(f), that

UCC and Courtland are both contributing to the same harm at issue in this action: the contamination of groundwater on the Courtland Property. Thus, to hold UCC 100% liable for the costs Courtland expended on its 2021 groundwater investigation, which revealed the presence of multiple hazardous substances in the groundwater on the northern portion of the property, would produce an inequitable result given the court's finding that Courtland is also a contributing source.

JA0856-JA0857.

The District Court held that UCC would also be entitled to an equitable allocation of any future costs incurred by Courtland that are recoverable under its declaratory relief holding. JA0859.

After trial Phase II, the District Court further held that, “the appropriate equitable allocation of CERCLA costs in this matter is generally an even split with a tilt in favor of Courtland.” JA1378-JA1379. The District Court held UCC liable for 75% of Courtland’s June and July 2021 sampling costs and allocated 25% to Courtland, entitling UCC to contribution from Courtland. JA1379-JA1380. Courtland appeals this allocation.

## ***2. RCRA Claims***

Courtland also brought claims under RCRA Subtitle D (regulating nonhazardous waste). Courtland’s claims under Subtitle D are at issue in the present appeal. In particular, the District Court held in its 2023 Order that

the Filmont facility continues to introduce arsenic into the groundwater as a result of the continued leaking/leaching of the solid waste contained therein, which is contaminating an underground drinking water source beyond the solid waste boundary as those terms are defined and is thus an “open dump” in violation of 42 U.S.C. § 6945(a) (§ 4005(a)) and 40 C.F.R. § 257.3-4(a).

JA0913. Thus, UCC was found to be in violation of the second prong of Courtland’s section 7002(a)(1)(A) claim for violation of RCRA’s Subtitle D groundwater open

dumping criterion. JA0916-JA0917. The District Court left the determination of an appropriate remedy for trial Phase II.

During the trial Phase II, UCC argued that its continued voluntary participation in the VRP suffices as an appropriate remedy for the RCRA open dump found by the District Court. Courtland, on the other hand, sought imposition of a permanent injunction against UCC for a remedy that results in a cleanup of the site that is compliant with the NCP. JA1388, JA1292.

After trial Phase II, the District Court held that Courtland failed to establish an irreparable injury to itself or the public in Phase II, and this factor weighs against injunctive relief. This finding, alone, ensured that Courtland cannot satisfy the “four-factor test” which a plaintiff must satisfy before a court can grant a permanent injunction. JA1348. The District Court also found that UCC’s participation in the VRP “can be expected to result in an NCP-compliant clean up that seeks to prevent offsite migration of contaminants, UCC faces state disciplinary action if it exits the VRP, and permitting the VRP to run its course is consistent with RCRA’s goal of enforcing RCRA compliance in conjunction with state programs that have been approved by the EPA. JA1349. This is so despite that fact that waste my remain in groundwater after completion of the VRP remedy, among other discrepancies. JA1361.

Courtland challenges the District Court’s rulings that (1) Courtland failed to demonstrate irreparable injury to itself or the public and (2) that no injunctive relief is necessary because UCC entered into the VRP.

### **3. *Pubic Nuisance Per Se Claim***

Concerning Courtland’s claim that Filmont is a nuisance *per se* inasmuch as it is said to constitute an open dump in violation of the West Virginia Solid Waste Management Act (“WVSWMA”), the District Court found that UCC was never required to operate the landfill under a permit issued pursuant to Article 15 of the West Virginia Code, or to comply with the regulations promulgated pursuant thereto. JA0936. Further, the District Court held that the WVSMA and the rules promulgated thereunder are “hopelessly in conflict” with respect to the term “solid waste disposal.” JA0947. The District Court held that term “solid waste disposal” does not plainly encompass the phenomenon of “leaking” from a wholly inactive site, and thus the leaching of contaminants from Filmont does not constitute “solid waste disposal” requiring a permit—in turn, Filmont is not an “open dump” on the ground that UCC is engaged in the practice of solid waste disposal without a permit under the WVSWMA.

The District Court further held that Filmont is not an open dump in violation of the WVSWMA and West Virginia Solid Waste Management Rules that define open dumps as “a place where solid waste is disposed in a manner that does not protect

the environment. *See* W. Va. Code St. R. §§ 33-1-3.2 (location standards for landfills) and 33-1-2.a.1 (protective measures). The District Court found that those rules do not apply to Filmont, based on interpretation of the applicability section set forth in W. Va. Code St. R. §§ 33-1-1 through 33-1-7. JA0949-JA0951. Therefore, the District Court held, Filmont does not constitute an open dump in violation of W. Va. Code § 22-15-10(a) and is not a public nuisance *per se* on that basis. JA0951. The Court reaffirmed its ruling with further opinion in its 2024 Order after trial Phase II. JA1332-JA1337.

Courtland appeals these holdings.

#### ***4. Pubic Nuisance Claim***

Similar to its holding with respect to Courtland's claim for an injunction under RCRA, the District Court held that Courtland failed to establish any harm to the general public in need of abatement as a result of any contamination emanating from Filmont and Massey and that Courtland also failed to demonstrate a "serious injury" to its property. JA0952-JA0953. Courtland appeals these holdings.

#### ***5. Clean Water Act Claims***

After trial Phase II, with respect to calculation of civil penalties for UCC's unpermitted discharges of stormwater associated with industrial activity, the District Court held that UCC would only be assessed penalties based on one single day of discharges (from three points at Filmont and Massey) based on only one event at

which Dr. Simonton testified to observing said discharges. JA2924-JA2929. The District Court held this despite acknowledging that “it is evident to the court that unpermitted stormwater discharges have likely been occurring from the Filmont drainage channel and the Massey culverts for some time given that it has undoubtedly rained sufficiently to produce stormwater discharges on many occasions since 1991.” JA2928. This resulted in a civil penalty imposition of \$200,136. JA2935. Courtland appeals these unreasonable holdings.

## V. STANDARD OF REVIEW:

The Court reviews a judgment resulting from a bench trial “under a mixed standard of review—factual findings may be reversed only if clearly erroneous, while conclusions of law are examined de novo.” *Plasterers’ Local Union No. 96 Pension Plan v. Pepper*, 663 F.3d 210, 215 (4th Cir. MD 2011) (quoting *Universal Furniture Int’l, Inc. v. Collezione Europa USA, Inc.*, 618 F.3d 417, 427 (4th Cir. NC 2010) (*per curiam*)). “[I]f the district court’s account of the evidence is plausible in light of the record in its entirety, [the Court of Appeals] will not reverse the district court’s finding simply because we have become convinced that we would have decided the question of fact differently.” *Id.* (quoting *TFWS, Inc. v. Franchot*, 572 F.3d 186, 196 (4th Cir. MD 2009)).

Further, a Court of Appeals reviews a decision to admit or exclude evidence for abuse of discretion. *United States v. Lighty*, 616 F.3d 321, 351 (4th Cir. 2010) (citing

*United States v. Young*, 248 F.3d 260, 266 (4th Cir. 2001)). Improper exclusion of evidence warrants a new trial only if it results in “a high probability that the error . . . affect[ed] the judgment.” *Huskey v. Ethicon, Inc.*, 848 F.3d 151, 159-60 (4th Cir. 2017) (quoting *United States ex rel. Drakeford v. Tuomey*, 792 F.3d 364, 375 (4th Cir. 2015)).

## VI. ARGUMENT:

### **A. Courtland II: The District Court erred as a matter of law by granting judgment for less than all of Plaintiff’s response costs under CERCLA.**

The District Court incorrectly applied the facts to law and held that the costs associated with the September 2020 kayak trip in Ward Branch and site visit ultimately do not constitute “necessary” costs of response under CERCLA.

The only “causation” required to be shown under a CERCLA § 107(a) claim is that the release or threatened release must be shown to have “caused” Courtland to incur response costs—which the District Court found to be true.

Here, the District Court’s ruling hinged on its interpretation of whether the September 2020 costs (totaling \$7,802.50) were “necessary” costs of response under CERCLA. JA0745-JA0746. This was erroneous. By contrast, the District Court held that Courtland incurred \$27,142.50 in response costs for preliminary groundwater investigation on the northern portion of the Courtland Property in June and July 2021, “which were incurred in direct response to Courtland’s reasonable



concern that its property had been impacted by the site,” and therefore were “necessary.” JA0850.

Here, because of Plaintiff’s concern that hazardous substance contamination from Filmont and Massey may have migrated or may be migrating onto and under the Courtland Property, as it had migrated onto neighboring properties, Plaintiff conducted an initial investigation into Filmont in September of 2020 and further sampling in June and July 2021. JA0739, JA0748. As the District Court noted, Dr. Simonton testified that the September 2020 kayak trip and observations were “critical” in assisting with his understanding of what was happening at the Filmont site and revealed that the “Ward Branch seep” was leaching hazardous substances from Filmont into Ward Branch. JA0745-JA0746; JA3923-JA3924. In particular, Dr. Simonton testified in that same passage cited by the District Court that, “Yes, that endeavor helped me understand what was happening at the site, yes, very much so.” JA3923-JA3924. Dr. Simonton also testified that he had “seen a lot of data generated by Union Carbide and their . . . consultants that . . . made it appear that there was . . . certainly the leachate and the discharges on that side of the facility [the north side] that I had not seen before,” thus constituting a reason for the September 2020 work. JA3918-JA3919.

However, the District Court found that “the costs associated with the September 2020 kayak trip/sampling in Ward Branch ultimately do not constitute ‘necessary’

costs of response under CERCLA.” JA0746. The District Court noted, “Courtland’s CERCLA claim in Courtland II seeks to recover costs incurred by Courtland in response to releases from Filmont and/or Massey that have migrated to the Courtland Property,” and held that “[c]osts incurred investigating releases from Filmont into Ward Branch **have no bearing on uncovering potential impacts** to the Courtland Property from migrating contamination via groundwater from Filmont and/or Massey.” JA0746-JA0747 (emphasis added).

For purposes of CERCLA, response costs are considered “necessary” when “an actual and real threat to human health or the environment exists” and “the response action is addressed to that threat.” *Carson Harbor Vill., Ltd. v. Unocal Corp.*, 270 F.3d 863, 872 (9th Cir. 2001). Here, the threat was hazardous substances at and emanating from Filmont and Massey that have come to be located in the environment as well as at and in the vicinity of the Courtland Property.

The heart of the issue here is whether a party has incurred “necessary” costs of response under CERCLA where it investigates discharges of hazardous substances at and emanating from a facility even if the particular discharges investigated are found not to be impacting that party’s property while other discharges are impacting the Plaintiff’s property, but all of the discharges are impacting or migrating in the environment. The answer must be that of course sampling easy to access discharges from any side of the source landfill property is informative of what is in the landfill

and what might be coming onto Plaintiff's property—and, therefore, are “necessary” costs of response.

The District Court cited *Von Duprin LLC v. Major Holdings, LLC*, 12 F.4th 751, 771 (7th Cir. 2021), for support of its holding that the September 2020 costs were not “‘necessary to enable subsequent measures to ensure a CERCLA-quality cleanup’ of the Courtland Property.” JA0747. But this misreads *Von Duprin* and improperly narrows that holding. In *Von Duprin*, the Seventh Circuit stated,

we see no legal infirmity in the district court's observation that § 107(a) permits a company to recover due diligence costs incurred in connection with the investigation of a contaminated site. It stands to reason . . . that such initial inquiries are necessary to enable subsequent measures to ensure a CERCLA-quality cleanup, as CERCLA and the NCP both contemplate.

*Von Duprin*, 12 F.4th at 771. Courtland's investigation of a “contaminated site” here is the **entire site**—not just its own property. So investigation of Filmont and understanding all of the potential contaminants emanating from it are part and parcel of understanding the entire site that includes Courtland's property and form a basis for the response action to be conducted. Similarly, in *Von Duprin*, the CERCLA plaintiff recovered costs for “remediation of the public park, residential vapor intrusion remediation, and various tests,” not just on Von Duprin's own property. *Id.* Those costs were still recoverable.

The same goes here—Courtland’s universe of recoverable costs cannot be limited to its own property; rather, it rightfully includes investigation and remediation of the entire contaminated site.

Courtland’s response costs were obviously a response addressed to “an actual and real threat to human health or the environment.” *Carson Harbor*, 270 F.3d at 872. The law does not require the threat be “to plaintiffs’ property.”

**B. Courtland II: The District Court erred as a matter of law by finding Courtland liable for contribution to UCC under CERCLA § 113, and erred in its equitable allocation by allocating 25% of past and future response costs to Appellant.**

The District Court found Courtland liable pursuant to UCC’s contribution claim under CERCLA section 113(f), holding that “UCC and Courtland are both contributing to the same harm at issue in this action: the contamination of groundwater on the Courtland Property,” with respect to investigation of groundwater on the northern portion of the Courtland Property. JA0856-JA0857. The District Court also held that UCC would be entitled to an equitable allocation of any future costs incurred by Courtland. JA0859. Courtland appeals these holdings as errors of law, which are reviewed de novo. The fundamental error with the District Court’s ruling is that it never properly found a single, indivisible harm for which there is no reasonable basis of apportionment—a necessary precursor to awarding any contribution, whatsoever, under CERCLA § 113.

After trial Phase II, the District Court held UCC liable for 75% of Courtland's June and July 2021 sampling costs and allocated 25% to Courtland, entitling UCC to contribution from Courtland. JA1379-JA1380. To the extent that this Court does not reverse the District Court's ruling that Courtland is liable for contribution, Courtland also appeals the District Court's application of equitable factors, which is reviewed for clear error. *PCS Nitrogen Inc. v. Ashley II of Charleston LLC*, 714 F.3d 161, 186 (4th Cir. 2013) (citing *Boeing Co. v. Cascade Corp.*, 207 F.3d 1177, 1187 (9th Cir. 2000)).

***1. UCC Failed to Demonstrate the there is a "Single Indivisible Harm for Which There is no Reasonable Basis of Apportionment" at the Courtland Property.***

As the United States Supreme Court has made clear, the black letter law principle that a contribution claim cannot exist in the absence of joint and several liability fully applies to claims for contribution under CERCLA § 113(f). *Burlington N. & Santa Fe Ry. v. United States*, 556 U.S. 599, 614-15 (2009); *Territory of Guam v. United States*, 593 U.S. 310, 315 (2021) ("Contribution . . . is concerned only with the distribution of CERCLA liability."). Again, joint and several liability under CERCLA results **only** from proof that two or more parties have contributed to a **"single, indivisible harm:"**

Following *Chem-Dyne*, the Courts of Appeals have acknowledged that "[t]he universal starting point for divisibility of harm analyses in CERCLA cases" is § 433A of the Restatement (Second) of Torts. *United States v.*

*Hercules, Inc.*, 247 F.3d 706, 717 (CA8 2001); *Chem-Nuclear Systems, Inc. v. Bush*, 352 U.S. App. D.C. 23, 292 F.3d 254, 259 (CADDC 2002); *United States v. R. W. Meyer, Inc.*, 889 F.2d 1497, 1507 (CA6 1989). Under the Restatement,

“when two or more persons acting independently caus[e] a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he has himself caused. Restatement (Second) of Torts, §§ 433A, 881 (1976); Prosser, *Law of Torts* (4th ed. 1971), pp 313-314 . . . . But where two or more persons cause a single and indivisible harm, each is subject to liability for the entire harm. Restatement (Second) of Torts, § 875; Prosser at 315-316.” *Chem-Dyne Corp.*, 572 F. Supp., at 810.

In other words, apportionment is proper when “there is a reasonable basis for determining the contribution of each cause to a single harm.” Restatement (Second) of Torts § 433A(1)(b), p 434 (1963-964).

*Burlington Northern*, 556 U.S. at 614.

Here, there is no such “single, indivisible harm.” This Court found as follows:

- (1) that hazardous substances released into the environment from UCC’s Filmont facility have been detected in the groundwater underlying the northeastern corner of the Courtland property; JA0752-JA0754, JA0761-JA0762
- (2) that it is possible, or alternatively, the Court cannot conclude that it is not possible that there exists a pathway for the hazardous substance contamination in the soils in the southern part of the Courtland property to migrate into the groundwater underlying the northeastern corner of the Courtland property. JA0762-JA0771.

Given that there has been no sampling of the groundwater underlying the Courtland property other than the very limited sampling of groundwater by Dr. Simonton

conducted in the far northeastern corner of the Courland property proximate to UCC's Filmont facility, **neither the expert witness for Courland nor the expert witnesses for UCC are able to conclude that the existing evidence establishes that the hazardous substance contamination released on or from the Courland property has commingled in the groundwater environment at Courland with similar hazardous substances released from UCC's Filmont facility to form a single, indivisible harm to the environment cognizable under CERCLA.** *See* JA0762-JA0773.

Further, Courland's CERCLA § 107(a) claim concerns recovery of response costs for contaminants at and emanating from Filmont and Massey, and anywhere **those contaminants** come to be located. There is no evidence, whatsoever, that any contaminants originating **from the Courland Property** caused any increase in the amount of response costs incurred by Courland. Nor has Courland requested that UCC cleanup contamination alleged to be coming from the Courland Property. It is important to note that UCC does not claim that Courland caused or contributed to the contamination **at and emanating from the Filmont and Massey facilities** onto the Courland property nor did the District Court make such a finding.

Accordingly, there does not exist in this case evidence of either a "single harm" or any evidence that such a claimed or hypothesized single harm is "indivisible" (*i.e.*, not reasonably capable of being apportioned according to the relative contributions

of the parties that contributed to that “single harm.”). Thus, there is no basis for UCC’s contribution claims nor any share to be allocated to Courtland.

For these reasons, the District Court erred. In the absence of a factual basis legally adequate to support that finding, UCC has no CERCLA § 113(f) contribution claim upon which it can properly have costs for which it is liable allocated to Courtland, and the District Court’s rulings must be reversed on the finding of contribution and with respect to the bounds of declaratory relief, which should not be limited just to groundwater at Courtland’s property. Courtland’s declaratory relief claim was related to all hazardous substances at and emanating from Filmont and Massey, **wherever it has come to be located.**

## ***2. The District Court Clearly Erred in its Equitable Allocation.***

The District Court also erred in its application of equitable factors after trial Phase II. In particular, its analysis and parenthetical commentary on respective factors included the following:

The factors are (1) “the ability of the parties to demonstrate that their contribution to a discharge, release, or disposal of a hazardous waste can be distinguished” from another party’s contribution (neither party established an ability to do so by the preponderance of the evidence); . . . (4) “the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste, especially waste driving the remediation” (UCC appears to be the



primary cause, but Courtland is also a contributing source); . . . In all, the Gore factors generally counsel an even equitable allocation of Courtland's investigatory costs. JA1377-JA1378.

Thus, the District Court clearly erred in its allocation of any costs to Courtland.

**C. Courtland II: The District Court erred as a matter of law by holding that Courtland failed to prove that the Filmont open dump caused it a special injury and failed to show any harm to the general public in need of abatement, thus factoring against the issuance of a permanent injunction for the RCRA Open Dump.**

The District Court held that Courtland failed to establish an irreparable injury to itself or the public in Phase II, a factor that weighs against issuing a permanent injunction. JA1348; JA0952-JA0953.

This holding was despite all of the following findings of fact:

- Arsenic -- identified as one of the prominent constituents of concern and detected in the Filmont groundwater plume beyond the landfill boundary as -- detections in the monitoring wells on the western side of Davis Creek -- exceeding MCLs. JA0773-JA0774.
- Arsenic detected in the Filmont groundwater plume is more likely than not from solid waste disposed of in the landfill and leached. JA0776.
- Arsenic continuously leaches from the solid waste in the landfill has contaminated the aquifer underlying and beyond the northwesterly

landfill boundary of Filmont, which contains less than 10,000 mg/L total dissolved solids. JA0776.

- The earthen berm around Filmont was constructed to contain the solid waste deposited in the landfill, but is not impermeable, meaning that it does not prevent the washout of landfill leachate from escaping into the environment. UCC's own documents confirm the existence of widespread seepage of leachate along the northern toe of the landfill at the base of the berm into the Northern Boundary ditch, which feeds into Ward Branch, which feeds into Davis Creek. JA0788- JA0789.
- Courtland's groundwater samples taken in June and July 2021 revealed the presence of three VOCs and eight SVOCs, as well as fifteen metals, including arsenic, 1,4 dioxane, and bis (2-chloroisolpropyl) ether, which are also identified by UCC as the most prominent constituents of concern in the Filmont groundwater plume. JA0750- JA0752. All three of these are CERCLA hazardous substances. JA0753.
- Each of these three substances have been detected in groundwater monitoring wells located near the southwestern edge of Filmont, and two of the three substances -- arsenic and 1,4 dioxane -- have been detected at a groundwater sampling point located in the southwestern corner of Massey. JA0761-JA0762.

- The District Court found that contamination detected on the southwestern edges of Filmont and the upper western portion of Massey could have traveled onto the Courtland Property via groundwater. JA0754.
- Courtland demonstrated by a preponderance of the evidence that contaminated groundwater in the southwestern portion of Massey and a confined component of the groundwater along the southwestern edge of Filmont could reach the small northern portion of the Courtland Property at the point where Dr. Simonton's 2021 sampling point is located. JA0762.
- Furthermore, and importantly, two of the hazardous substances -- 1,4 dioxane and bis (2-chloroisopropyl) ether – each detected in a single well in Dr. Simonton's 2021 groundwater sampling on northern Courtland Property and, in the past, nearby on Filmont were not detected in his 2017 groundwater samplings or in the 2020 UCC soil samplings conducted on Courtland, and thus far have not been found on other Courtland Property, which leads to the finding that these two hazardous substances could have traveled from the southwestern edges of Filmont to Courtland via groundwater. JA0773.

- The Court found that multiple ongoing point source discharges exist from the northern side of Filmont and Massey and that unpermitted stormwater discharges have occurred from Filmont and Massey onto Courtland's property. Sections IV.C.7, *supra*.

Nonetheless, in the face of these ongoing violations, the District Court incomprehensibly found that there is no irreparable injury to Courtland or the public. The District Court's holding flies in the face of environmental law and property rights everywhere.

The actual impacts and continued threat of impacts from the Filmont Open Dump to Courtland's property, an immediately adjacent waterfront neighbor to Filmont and Massey, for which Courtland has actually incurred costs of response and has been awarded CERCLA response costs and declaratory relief determination for contamination coming from Filmont/Massey to the Courtland Property, is an obvious special injury that differs not only in degree but in character from the injury inflicted upon the general public—comparable to public nuisance case law. *City of Portland v. Monsanto Co.*, No. 3:16-cv-01418-PK, 2017 U.S. Dist. LEXIS 156370, at \*5 (D. Or. Sep. 22, 2017) (“costs incurred ‘by engaging in action to determine the extent of [] contamination and the appropriate means of protecting [a plaintiff's property] from the spreading of the contamination’ are costs unique to the plaintiff and ‘are adequate to establish a special injury.’ In other words, the *costs* that a

plaintiff incurs in remediating damage are unique to the plaintiff and can constitute a special injury for the purposes of showing standing to bring a public nuisance claim.”) (citing *City of Portland v. Boeing Co.*, 179 F. Supp. 2d 1190, 1196 (D. Or. 2001)); *New Mexico v. GE*, 335 F. Supp. 2d 1185, 1240-41 (D.N.M. 2004) (same) (citing *Tosco Corp. v. Koch Industries, Inc.*, 216 F.3d 886, 895-96 (10th Cir. 2000)); *Mangini v. Aerojet-General Corp.*, 230 Cal. App. 3d 1125, 1138 (1991) (same); see *Corradetti v. Sanitary Landfill, Inc.*, 912 F. Supp. 2d 156, 163 (D.N.J. 2012) (alleging contamination of their drinking water **and their property**, Plaintiffs held to have alleged harms that are different in kind and thus satisfy the special injury requirement). Courtland has met that burden.

The District Court’s holding must be reversed.

**D. Courtland II: The District Court erred in its holding that Courtland failed to establish, in support of its public nuisance claim, any harm to the general public in need of abatement as a result of any contamination emanating from Filmont and Massey and that Courtland also failed to demonstrate a “serious injury” to its property.**

Similar to its holding with respect to Courtland’s claim for an injunction under RCRA, the District Court held that Courtland failed to establish any harm to the general public in need of abatement as a result of any contamination emanating from Filmont and Massey and that Courtland also failed to demonstrate a “serious injury” to its property. JA0952-JA0953. The District Court improperly equated the requirement to the “imminent and substantial endangerment” requirement under a

RCRA § 7002(a)(1)(B) claim: “For the same reasons Courtland’s RCRA imminent and substantial endangerment claim fails, so too does Courtland’s public nuisance claim.” JA0952-JA0953. But that analysis is an error of law—rather, the case law cited in the prior section herein shows that Courtland satisfies the proper test under nuisance law. *City of Portland*, No. 3:16-cv-01418-PK, 2017 U.S. Dist. LEXIS 156370, at \*5; *New Mexico*, 335 F. Supp. 2d at 1240-41; *Mangini*, 230 Cal. App. 3d at 1138.

Recent case law from the West Virginia Supreme Court of Appeals includes only a “special injury” requirement, in line with jurisdictions of other states as cited above. *Hark v. Mountain Fork Lumber Co.*, 127 W. Va. 586, 34 S.E.2d 348, 354 (W. Va. 1945); *Duff v. Morgantown Energy Ass’n*, 187 W. Va. 712, 716 n.7, 421 S.E.2d 253, 257 (1992) (discussing the “special injury” requirement without mention of need for “serious and permanent” injury that “affects the substance and value” of plaintiff’s property); see *Barker v. Naik*, No. 2:17-cv-04387, 2018 U.S. Dist. LEXIS 135289, at \*6 (S.D. W. Va. Aug. 10, 2018). In fact, if the harm was “serious and permanent,” it would not be abatable. But Courtland’s cause of action herein is for abatement of the ongoing, continuing public nuisance. See JA0952. This conflation of case law by the District Court is an error of law.

Accordingly, the “special injury” need not be a “serious and permanent” injury to Courtland’s property—rather, the incurrence of response costs satisfies the special

injury requirement, in addition to the actual and threatened contamination of Courtland's property. The District Court's ruling should be reversed.

**E. Courtland II: The District Court Committed Plain Legal Error by Holding: (1) Filmont is Not an “Open Dump” Under the W. Va. Solid Waste Management Act (“WVSWMA”), W. Va. Code § 2-15-10(a); and (2) the Open Dumping Provisions of the W. Va. Solid Waste Management Rule that Have Been in Effect for More than Two (2) Decades Are “Hopelessly in Conflict with the WVSWMA” and, Therefore, Unenforceable.**

The Courtland II Complaint asserts that the W. Va. Solid Waste Management Act (“WVSWMA”), W. Va. Code, Chapter 22, Article 15 is a state statute that: **(1)** became effective pursuant to RCRA within the meaning of RCRA § 7002(a)(1)(A), 42 U.S.C. § 6972(a)(1)(A); **(2)** W. Va. Code § 22-15-1(c)(1) is a Legislative Declaration that “Uncontrolled, inadequately controlled and improper collection, transportation, processing and disposal of solid waste is a public nuisance and a clear and present danger to people;” **(3)** W. Va. Code § 22-15-2, defines an “Open Dump” as “any solid waste disposal which does not have a permit under this article, or is in violation of state law, or where solid waste is disposed in a manner that does not protect the environment;” and **(4)** in its Section 10(a) declares it unlawful for any landowner in West Virginia “to allow an open dump to exist on the landowner’s property unless that open dump is under a compliance schedule approved by the director [of the W. Va. Dept. of Environmental Protection];” Further, Courtland asserted that the W. Va. Solid Waste Management Rule, W. Va. C.S.R., Chapter 33,

Series 1 (“WVSWMR”), promulgated by the Cabinet Secretary of the WVDEP pursuant to authority conveyed in WVSWMA § 5, applies to UCC’s Filmont Dump and sets forth three separate provisions, each of which define and prohibit an “Open Dump”; WVSWMR §§ 1.6, 7.1 (applying the definition of the term “Open Dump” in WVSWMR § 2.84) and 7.2. Against this W. Va. statutory and regulatory background and because UCC’s Filmont Dump is and always has been a very large, unlined whole in the ground that contains more than two decades of the Hazardous Wastes and Hazardous Substances discarded from the then-largest petrochemical plant in this country (*i.e.*, UCC’s South Charleston Chemical Plant). Filmont has never had any leachate control or collection system. Filmont is located **immediately adjacent** to Davis Creek, Waters of the U.S. and of the State of W. Va., Courtland asserted that UCC’s Filmont Dump is a prohibited “Open Dump” under the WVSWMA and WVSWMR and *Per-Se* Public Nuisance under W. Va. law.

The District Court disagreed. Regarding Courtland’s claims under the WVSWMA and WVSWMR, in its 2023 Order the District Court held that: **(1)** because UCC did not actively dispose of Solid Waste into its Filmont Dump after the 1983 effective date of the WVSWMA, the WVSWMA does not require that UCC has a permit for its Filmont Dump issued under the WVSWMA;<sup>5</sup> **(2)** that the Open

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<sup>5</sup> Courtland does not challenge this ruling of the District Court regarding the need for UCC’s Filmont Dump to have a permit issued under the WVSWMA.



Dumping provisions of the WVSWMA apply only to the active disposal of Solid Waste after the 1983 effective date of the WVSWMA; and (3) the Open Dumping prohibitions in the WVSWMR are “hopelessly in conflict with” the provisions of the WVSWMA and are, therefore unenforceable. Because of those holdings, the District Court held that UCC’s Filmont Dump is not an “Open Dump” prohibited by either the WVSWMA or the WVSWMR and, therefore, not a *Per-Se* Public Nuisance under WVSWMA § 1(c)(1). Courtland asserts that the District Court’s last two holdings described above are clear legal error and require reversal by this Court.

***1. Contrary to the District Court’s holding, the Use of the Defined Term “Solid Waste Disposal” in the Definition of the term “Open Dump” in WVSWMA § 2 Applies Equally to Solid Waste Disposed at Facilities that Are Actively Conducting Disposal Operations at the Time of the Enactment of the WVSWMA and to Solid Wastes at “Closed” or “Inactive” Facility at which All Disposal Operations Were Terminated Prior to the Enactment of the WVSWMA***

In its 2023 Order, the District Court holding that the Open Dumping provisions of the WVSWMA apply only to the active disposal of Solid Waste by a human actor after the 1983 Effective Date of the WVSWMA is based entirely upon the two following finding by the District Court: (1) that unlike the definition of the term “disposal” in RCRA § 1004(3), 42 U.S.C. § 6973(3), the WVSWMA does not contain a definition of the term “Disposal” that includes passive leaking from waste already disposed of at a Facility; and (2) the definition of the term Open Dump in

WVSWMA § 2 because it includes the defined term “Solid Waste Disposal<sup>6</sup>”, applies only to Solid Waste actively disposed of by a human agent after the 1983 Effective Date of the WVSWMA. This conclusion is plain error because it ignores the stated purpose of the W. Va. Legislature in enacting the WVSWMA, which was to accomplish compliance with the federal “minimum requirements” of RCRA Subtitle D so as to qualify West Virginia for approval by USEPA as a RCRA Subtitle D “Participating State,” a fact that the District Court expressly acknowledged in a later portion of its 2023 Order. Moreover, the District Court is both grammatically and contextually incorrect in its conclusion that the phrase “the practice of disposing of solid waste including placing, depositing, dumping, throwing, or causing any solid waste to be placed, deposited, dumped, or thrown” used in the definition of the term “Solid Waste Disposal” in WVSWMA § 2 implies or imports any temporal context with regard to when the referenced “practice of disposing of Solid Waste” occurred or is occurring.

The District Court does not question the plain fact that one of the principal purposes of Congress in enacting RCRA was to effectuate nationwide both a prohibition of the Open Dumping of Solid Waste and a requirement that existing Open Dumps be upgraded to facilities that do not pose a danger to the environment

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<sup>6</sup> WVSWMA § 2 provides: “Solid waste disposal” means the practice of disposing of solid waste including placing, depositing, dumping, throwing, or causing any solid waste to be placed, deposited, dumped, or thrown.” W. Va. Code § 22-15-2.

or to health:

**(a) Objectives.** The objectives of this Act are to promote the protection of health and the environment and to conserve valuable material and energy resources by—

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**(3)** prohibiting future open dumping on the land and requiring the conversion of existing open dumps to facilities which do not pose a danger to the environment or to health;

RCRA § 1003, 42 U.S.C. § 6902. Congress accomplished this purpose by its enactment of RCRA § 4005, 42 U.S.C. § 9645 and by its enactment of RCRA Subtitle D, 42 U.S.C. § 6941 – 6949a. It established a strong financial incentive for States voluntarily to agree to enact and operate their Solid Waste Management laws and programs in accordance with the federal “minimum requirements” set forth in RCRA §§ 4003 and 4004, 42 U.S.C. §§ 6943 and 6944, which required recognition that Solid Waste management facilities present “no reasonable probability of adverse effects on health or the environment from disposal of solid waste at such facility.” RCRA § 4004(a), 42 U.S.C. § 6942(a). To effectuate this, Congress authorized USEPA to promulgate regulations that required elements of a “State Solid Waste Management Plan” be approved pursuant to RCRA § 4007 and comply with the federal “minimum requirements.” Those federal regulations are at 40 C.F.R., Parts 239 and 256. Those regulations require, at a minimum, that a RCRA Subtitle D Participating State classify Solid Waste Disposal facilities that pose any risk to the environment or health as prohibited Open Dumps and provide for the closure or

upgrading of those facilities. See: 40 C.F.R. § 256.23.

The District Court acknowledges that the W. Va. Legislature enacted the WVSWMA to accomplish compliance with the federal ‘minimum requirements’ applicable to a RCRA Subtitle D voluntarily “Participating State.” JA0884-JA0885. Yet, its “construction” of the WVSWMA, the District Court concludes that the W. Va. Legislature’s own legislation did not apply its Open Dumping definitions to Solid Waste management facilities that were either “closed” or “not receiving any further wastes” at the time of the enactment of the WVSWMA. Such construction would mean that the WVSWMA failed to comply with the federal “minimum requirements” for a “Participating State” under RCRA Subtitle D by not enacting legal authority requiring the closure or upgrading of existing Open Dumps and, therefore, failed to accomplish one of the acknowledged principle of legislative purpose for its enactment. Recently, echoing the holding by the District Court below, in *Living Lands, LLC v. Cline*, 591 F. Supp. 3d 79 (S.D. WV 2022) (Chambers, J.), the Court held: “The West Virginia Solid Waste Management Act was adopted to satisfy the minimum requirements of Subtitle D and was approved by EPA.” The very fact that USEPA approved the W. Va. Solid Waste Management Plan, with WVSWMA and the WVSWMR at its core, as compliant with the federal “minimum requirements” for a “Participating State” under RCRA Subtitle D – the initial enactment and every major revision to and reenactment of the WVSWMA and

WVSWMR since 1988 -- is compelling evidence that the District Court's "construction" of WVSWMA's Open Dumping provisions is incorrect as a matter of law. Without sufficient explanation, the District Court's interpretation upends one of the primary purposes of the WVSWMA, four decades after enactment. The District Court does not even attempt to offer any explanation of how its purported "construction" of the defined term "Solid Waste Disposal" could possibly comport with or accomplish the W. Va. Legislature's stated intention of enacting the WVSWMA to qualify West Virginia as a RCRA Subtitle D "Participating State." Neither does the District Court offer any explanation why there exists in W. Va. **not** a single case, **not** even one WVDEP promulgated regulation or Guidance Document, **nor** any decision of the W. Va. Environmental Quality Board that hears and resolves all appeals from decisions of WVDEP under the WVSWMA that even remotely supports such a "construction" of the Open Dumping provisions.

The other compelling reason to reject the District Court's "construction" of the WVSWMA Open Dumping provisions, is that it is based solely on the fact that the gerunds used in defining the term "Solid Waste Disposal (*i.e.*, "placing, depositing, dumping, throwing, or causing") are all in present tense and active mood. The District Court, using this fact, concludes that it, together with the fact the definition does not employ the passive term "leaking," evidences the intent of the W. Va. Legislature that the phrase should be construed to require active disposal by

a human agent after the effective date of the Act. The District Court’s fundamental error in arriving at this conclusion results from the fact that it focused solely on the terms “disposing, placing, depositing, dumping, throwing, or causing,” that the District Court incorrectly identifies as “present participles,”<sup>7</sup> and wholly ignored the other terms employed in that definition. “Solid Waste Disposal” is defined by WVSWMA § 2 as **“the practice of disposing of solid waste including placing, depositing, dumping, throwing, or causing any solid waste to be placed, deposited, dumped, or thrown.”** [bolding emphasis added]. When that definition is considered as a whole, the words “the practice of disposing” does **not** carry with it the same current temporal context as might be implied by using the single gerund “disposing” by itself. The District Court places great reliance on cases that have made the point **that the use of a present participle, such as the word “having,” means “presently and continuously,” and “does not include something in the past that has ended or something yet to come.”** JA0942. Although generally an accurate observation about the use of present participle or gerund **by itself**, that same

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<sup>7</sup> A “present participle” is the “ing” form of a verb used as an adjectival modifier, as in “I know a pond teeming with fish.” (The participle phrase “teeming with fish” describes “a pond.”) In the context of the instant definition of the term “Solid Waste Disposal,” the terms “disposing, placing, depositing, dumping, throwing, or causing” are actually gerunds, which are the “ing” form of a verb used as a noun (either as subject of a sentence or an object of a verb or preposition) rather than as an adjective, as in “Visiting is fun.” (“Visiting” is the subject of the sentence) or as in “I love visiting West Virginia.” (“Visiting” is the object of the verb “love.”).

observation is not at all accurate in describing the meaning and import of the phrase “the practice of having.” Again, the unmodified phrase “the practice of having” has, by itself, no temporal, directional or geographical implication at all. Alternatively stated, if the topic of a conversation is “the practice of disposing” that conversation could just as easily be addressing a past practice, an on-going practice or some future practice of disposing. Without adding a temporal or geographical modifier or a prepositional phrase to it (*i.e.*, past, present, future, in Oklahoma, by a machine, by a human being, *etc.*) the phrase by itself conveys neither any temporal or geographical implication nor any hint as to who or what might be the cause of it. This fact is further emphasized by the use in that same definition of the past tense of the infinitives (*i.e.*, “**to be placed, deposited, dumped, or thrown**”). For this reason, the District Court is simply incorrect as a matter of long-established English grammar in concluding that the phrase “the practice of disposing including placing, depositing, dumping, throwing, or causing any solid waste **to be placed, deposited, dumped, or thrown**” carries with it any implication at all that the phrase includes only a currently existing practice. Accordingly, this Court should reverse the District Court’s holding the use of the defined term “Solid Waste Disposal” in the definition of the term “Open Dump” in WWSWMA § 2 necessarily indicates that the W. Va. Legislature intended that term to apply only to the active disposal of Solid Waste by

a human agent after the effective date of the WVSWMA.<sup>8</sup>

***2. Wholly without Regard to When any Solid Waste Was Disposed of in W. Va., the Open Dumping provisions of WVSWMA §§ 2 and 10(a), W. Va. Code § 22-15-2 and 10(a), Prohibit: (1) Any “Solid Waste Disposal” that Is “in Violation of W. Va. Law;” and (2) Any Site or Location Where Solid Waste “Is Disposed” in a Manner that Does Not Protect the Environment.***

The definition of the term “Open Dump” in WVSWMA § 2 provides: “Open dump” means any solid waste disposal which does not have a permit under this article, or is in violation of state law, or where solid waste is disposed in a manner that does not protect the environment. For the reasons set forth in the preceding Section above, Courtland asserts that this Court should reverse the District Court’s holding that the use of the defined phrase “solid waste disposal” in that definition indicates the intention of the W. Va. Legislature that the term “Open Dump” applies only to sites or facilities where there has been active disposal of Solid Waste by a human actor after the effective date of the WVSWMA. Courtland also asserted before the District Court that the phrase within that same definition “where solid waste is disposed in a manner that does not protect the environment” indicates the

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<sup>8</sup> At p. 5 of its 2024 Order following the Phase II trial, the District Court asserts that “the Parties have not challenged the court’s interpretation of the active-conduct limitation of the WVSWMA’s definition of “solid waste disposal [made in its 2023 Order following the Phase I trial].” This assertion is mystifying to Courtland as the District Court repeatedly emphasized that the Phase II trial was to address damages and remedy issues and not to re-litigate liability issues. Courtland asserts that this appeal, and not the Phase II trial before the District Court, is the only proper proceeding in which to challenge the District Court’s holdings on the scope of liability under the WVSWMA.



intention of the W. Va. Legislature that phrase have the same scope and meaning as the phrase “is disposed of” has in the definition of the term “Open Dump” in RCRA § 1004(14)<sup>9</sup>, 42 U.S.C. § 6903(14). The District Court disagreed, instead holding at p. 5 – 8 of its 2024 Order that the phrase “where solid waste is disposed in a manner that does not protect the environment” in the WVSWMA’s definition of the term “Open Dump” cannot be read “in isolation” from the other provisions of that definition and is properly construed as being modified by the antecedent term “solid waste disposal” thus rendering the phrase applicable only to a site or facility where there has been active disposal by a human agent after the effective date of the WVSWMA.

On this point, Courtland asserted the following two points to the District Court: **(1)** the phrase “is disposed” in the WVSWMA’s definition of the term “Open Dump” is the only place in that entire WVSWMA that the term appears, and because that term is a direct quote by the W. Va. Legislature from the congressional definition of the term “Open Dump” in RCRA § 1004(14) it should be construed to have the same scope and meaning given to it in RCRA; and **(2)** that same term as used in the RCRA definition of “Open Dump” is the subject of an extensive analysis and holding

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<sup>9</sup>. RCRA § 1004(14) provides: **(14)** The term “open dump” means any facility or site where solid waste **is disposed of** which is not a sanitary landfill which meets the criteria promulgated under section 4004 and which is not a facility for disposal of hazardous waste. 42 U.S.C. § 6903(14) [bolding emphasis added].

by the U.S. Court of Appeals for the District of Columbia Circuit in *Utility Solid Waste Activities Group v. Environmental Protection Agency*, 901 F.3d 414, 442 (D.C. Cir. 2018) in which the D.C. Circuit concluded that the phrase “is disposed of” as used in RCRA’s definition of the term “Open Dump” includes all solid waste at a disposal site or facility regardless of when the waste was originally placed at that site or facility. Despite the fact that the District Court at p. 265 of its 2023 Order concurred that the D.C. Circuit’s definition of the term “is disposed of” in RCRA § 1004(14), it attempted to distinguish that holding from its holding regarding the same language in the WVSWMA by noting that RCRA’s definition of the term “Open Dump” must be read *in para materia* with RCRA’s definition of “Disposal” that, unlike the WVSWMA, includes the passive term leaking.

This Court should reverse the District Court’s holdings regarding the proper scope and meaning of the phrase “is disposed” in the WVSWMA’s definition of the term “Open Dump” as legal error for each of the following reasons. **First**, the District Court held that the phrase “where solid waste is disposed in a manner that does not protect the environment” in the WVSWMA’s definition of an “Open Dump” should be understood and read as “solid waste disposal where solid waste is disposed in a manner that does not protect the environment.” Such a construction is grammatically unnecessary and patently awkward. The District Court’s insistence that this construction is necessary to be consistent with the other phrases in that

sentence solves neither problem. More importantly, as Courtland argued in the preceding Section above, the proper construction of the phrase “solid waste disposal” for WVSWMA’s definition of “Open Dump” does **not** import the temporal limitation. Accordingly, imposing that phrase on the phrase “is disposed” does not properly alter the meaning of the phrase in the WVSWMA’s definition of an “Open Dump.” Instead, the District Court’s construction of that phrase only renders the phrase redundant and awkward – such redundancy should be avoided with statutory construction. **Second**, in arriving at its holding that the phrase “is disposed of” in RCRA § 1004(14) applies to all solid waste at a disposal site or facility regardless of when the waste was first placed there, the D. C. Circuit did not rely, as the District Court below asserted, on the fact that RCRA’s definition of the term “Disposal” includes “leaking.” Instead, the D.C. Circuit held:

Importantly, while the “is” retains its active present tense, the “disposal” takes the form of a past participle (“disposed”). In this way, the disposal itself can exist (it “is”), even if the act of disposal took place at some prior time.

*Utility Solid Waste*, 901 F.3d at 440. Accordingly, this Court should reject the District Court’s attempt to distinguish the D.C. Circuit’s construction of the term “is disposed” and reverse the District Court’s holding that the same term in the WVSWMA only applies to wastes actively disposed of by human actors after the effective date of the Act. **Third**, this Court should reject the District Court’s

proposed construction of the phrase “is disposed” in the WVSWMA’s definition of “Open Dump” because that construction would operate legally to defeat the well-recognized intention of the W. Va. Legislature to qualify West Virginia for USEPA approval under RCRA § 4007 as “Participating State” under RCRA Subtitle D.

***3. The District Court’s Holding that the Applicability Section of the WVSWMR Excuses UCC’s Filmont Dump from Any Legal Need to Comply with the WVSWMR Is in Every Regard Clear and Plain Legal Error and Should Be Reversed by this Court.***

The District Court asserted that Courtland had ignored the Applicability provision of WVSWMR § 1.1.a and, properly construed, that Section of the WVSWMR: **(1)** excuses UCC’s Filmont Dump from any need to comply with the WVSWMR; and **(2)** requires only that UCC’s Filmont Dump comply with its alleged permit as an “Inert Landfill” allegedly issued prior to the enactment of the WVSWMA. JA0949. Courtland disagrees.

The District Court held that WVSWMR § **1.1.a.1** applies to UCC’s Filmont Dump and operates only to require that UCC’s Filmont Dump operate in compliance with its pre-WVSWMA permit. JA0949-JA0950. This holding is Plain Error because WVSWMR § 1.1.a.1 applies **only** to “Permittees or applicants of solid waste landfills (SWLFs), or portions thereof, that stopped receiving waste before June 2, 1996.” WVSWMR § 2.124 defines the terms “Solid Waste Landfill Facility” and “SWLF” to each mean:

**2.124. "Solid Waste Landfill Facility (SWLF)"** means a discrete area of land or portion thereof or an excavation **that receives household waste** and that is not a land application facility, surface impoundment, injection well, or waste pile. A SWLF may also receive other types of RCRA subtitle D solid wastes, such as commercial solid wastes, nonhazardous sludge, small quantity generator wastes, and industrial solid wastes.

W. Va. C.S.R. § 33-1-2.124 [bolding emphasis added]. WVSWMR § 2.55 defines the term “Household Waste” as:

**2.55."Household Waste"** means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

W. Va. C.S.R. § 33-1-2.55. Thus, a “SWLF” or “Solid Waste Landfill Facility” under the WVSWMR is what federal law and laws of many other states refer to as “Municipal Solid Waste Landfill.” See generally, 40 C.F.R., Part 258 [“**Criteria for Municipal Solid Waste Landfills**”]. UCC’s Filmont Dump is not now and never has been a facility that ever received any “household wastes.” Nor has UCC attempted to argue that Filmont accepted Household Waste. Instead, it is and always has been an “Industrial Solid Waste Landfill” as that term is defined in WVSWMR § 2.59 that received “Industrial Solid Wastes” and, prior to the enactment of RCRA, Hazardous Wastes from UCC’s various operating facilities. **Accordingly, WVSWMR § 1.1.a.1 does not apply to UCC’s Filmont Dump.** The District Court’s holding to the contrary is Plain Legal Error.

**Second**, the District Court’s held at p. 313 of its 2023 Order that:

**[T]he applicability requirements of West Virginia’s Solid Waste Management Rule make clear that only solid waste landfills that continued to receive waste after June 2, 1996, would be required to comply with not only the terms and conditions of their permit, but also the rules and regulations effective and existing today.** Thus, any of Courtland’s alleged open dumping violations premised on today’s rules and regulations contained in West Virginia’s Solid Waste Management Rule fail as a matter of law.

Id. Furthermore, the District Court’s holding is clear legal error because WVSWMR § 1.1.a.4 provides:

**1.1.a.4. The applicability requirements of this paragraph [*i.e.*, all of WVSWMR § 1.1.a] apply only to existing solid waste landfill solid waste facilities. All other facilities must continue to comply with their existing permit and this rule, *W. Va. Code §§22-15-1 et seq., 22-12-1 et seq. and 22-11-1 et seq.* as applicable, until such time as the permit is subject to renewal, modification or other similar permitting function.**

W. Va. C.S.R. § 33-1-1.1.a.4 [bolding emphasis added]. As discussed above, UCC’s Filmont Dump is not a Solid Waste Landfill Facility as that term is defined by the WVSWMR. Moreover, WVSWMR § 2.47 defines the term “Existing SWLF” as “any solid waste landfill that is currently depositing solid waste.” W. Va. C.S.R. § 33-1-2.47. As UCC’s Filmont Dump stopped receiving waste in 1987, and original promulgation of the WVSWMR was 1988, it is not an “Existing SWLF.” Accordingly, WVSWMR § 1.1.a.4 unequivocally requires UCC’s Filmont Dump to comply with its existing permit **and the WVSWMR**. UCC has no such permit for

Filmont. The District Court's holding to the contrary is Plain Error and should be reversed by this Court.

***4. The District Court's Holding First Made Now More than 40 years after the Initial Promulgation of the WVSWMR and More than 26 Years After Its Last Repromulgation in 1996 that the WVSWMR Is "Hopelessly in Conflict" with the WVSWMA and Is Unenforceable Is Plain and Clear Legal Error Requiring Reversal by this Court.***

Since Courtland first brought its claims against UCC's Filmont Dump, the WVSWMR has continuously provided:

**1. WVSWMR § 2.43 ["Definition of "Disposal"]:**

**2.43 "Disposal"** means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

W. Va. C.S.R. § 33-1-2.43

**2. WVSWMR § 2.84 ["Definition of 'Open Dump'"]:**

**2.84.** "Open Dump" means any solid waste disposal that does not have a permit under *W. Va. Code §22-15-1 et seq.*, and is not otherwise authorized by an order of the Secretary; or is in violation of state law; or where solid waste is disposed in a manner that does not protect the environment.

**3. WVSWMR § 1.6.a and .b ["Lawful Disposal of Solid Waste Required"]:**

**1.6.a.** The discharge, deposit, injection, dumping, spilling, leaking burning, burying, or otherwise placing of any solid waste or leachate into or on any land or water so that **such solid waste or any constituent thereof** may enter the environment or be emitted into the air, **or discharged into any waters, including groundwaters**, is prohibited unless specifically authorized by a permit or permits from the Department.

**1.6.b.** Solid waste facilities or activities failing to satisfy this subsection are considered open dumps, as defined in section 2, and will be subject to the actions and penalties outlined in *W. Va. Code §22-15-15*.

W. Va. C.S.R. §§ 33-1-1.6.1 and .b [bolding emphasis added].

**4. WVSWMR § 7.1 [“Prohibitions”] provides in relevant part:**

**7.1. Prohibitions.**

**7.1.a.** No person may create or operate an open dump.

**7.1.b.** No person may contribute additional solid waste to an open dump at any time.

**7.1.c.** [N]o landowner may allow an open dump to exist on his or her property, unless such open dump is under a compliance schedule approved by the Secretary.

**5. WVSWMR § 7.2 [“Protection of the Environment and the Public”]:**

**7.2.a. Any site at which the following protective measures have not been instituted will be classified as an open dump:**

**7.2.a.1.** Measures must be taken **to prevent** the discharge of pollutants from the accumulated waste into the waters of the State (*e.g.*, measures to prevent runoff into surface water bodies or the infiltration of leachates into local aquifers).

Courtland asserted before the District Court that the foregoing provisions of the WVSWMR provide: **(1)** Since it cannot be reasonably disputed that UCC’s Filmont Dump is now in violation of the above-quoted provisions of WVSWMR §§ 1.6.a and 7.2.a.1, **UCC’s Filmont Dump is a prohibited “Open Dump” under WVSWMR §§ 1.6 and 7.2;** and **(2)** Since the definition of the term “Disposal” in WVSWMR § 2.43 is identical to the definition of that same term in RCRA § 1004(3) and include “leaking,” **UCC’s Filmont Dump is a prohibited “Open Dump” under WVSWMR § 2.84 and 7.1** because the defined term “solid waste disposal”



that is included in the WVSWMR's definition of "Open Dump" now includes, by operation of WVSWMR § 2.43 defining the term "Disposal," "the practice of leaking," which has been on-going at UCC's Filmont Dump continuously since its original creation. The District Court disagreed.

Because of its holding that the term "Solid Waste Disposal" as defined in WVSWMA § 2 applies only to Solid Wastes actively disposed of by a human actor after the effective date of the WVSWMR and because the WVSWMA includes that term in its definition of an "Open Dump" in WVSWMA § 2, the District Court held at p. 310 – 314 that the WVSWMR Open Dumping provisions are "hopelessly in conflict" with the Open Dumping provisions of the WVSWMA and, accordingly, they are unenforceable. Courtland respectfully advises this Court that this holding is Plain and Clear Legal Error.

The WVSWMA was substantially amended, reenacted and recodified by the W.Va. Legislature in 1995. Those legislative actions moved the WVSWMA into its current codification in Chapter 22, Article 15 of the W. Va. Code. Those 1995 amendments to the WVSWMA required the amendment and repromulgation of the WVSWMR by the then-Director of WVDEP, which amendments and repromulgation was expressly authorized by the W. Va. Legislature in WVSWMA § 5. The 1996 repromulgation of the WVSWMR resulted in its recodification to its current location Chapter 33, Series 1 of the W. Va. Code of State Rules. Both the

substantial amendment and repromulgation of the WVSWMA (1995) and of the WVSWMR (1996) triggered USEPA review of the entire W. Va. Solid Waste Management Plan, including WVSWMA and WVSWMR, pursuant to 40 C.F.R. § 239.12.

The above-quoted provisions of WVSWMR § 1.6, 2.43 and 7.2 were added to the WVSWMR in 1996. See: Attachment 1, filed herewith (“Disposal” defined at section 2.40 in that version, now is at 2.43; *see* W. Va. C.S.R. § 33-1-2). W. Va. Code § 29A-3-11 mandates that all significant revisions of Legislative Rule expressly authorized to be promulgated by any provision of the W. Va. Code must be submitted to the Joint Legislative Rulemaking Review Committee comprised of Members of both the W. Va. House of Delegates and the W. Va. Senate for their review and approval. W. Va Code § 29A-3-11(b) provides in relevant part:

**(b)** The committee shall review each proposed legislative rule and, in its discretion, may hold public hearings thereon. Such review shall include, but not be limited to, a determination of:

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**(2) Whether the proposed legislative rule is in conformity with the legislative intent of the statute which the rule is intended to implement, extend, apply, interpret or make specific;**

*Id.* As indicated in Attachment 2, the 1995 proposed revisions to the WVSWMR were submitted to that Joint Legislative Committee on July 31, 1995. In turn, the Joint Legislative Committee required WVDEP to effect specific changes to the

WVSWMR proposed revisions. Attachment 2 demonstrates that WVDEP revised the proposed 1996 WVSWMR revisions to effect the changes the Joint Legislative Rulemaking Review Committee required. On December 12, 1995, the Joint Legislative Committee approved the revised WVSWMR with some modifications. On January 24, 1996, WVDEP filed the modified, revised WVSMR with the W. Va. Secretary of State. Attachment 2. Also as documented in Attachment 2, WVDEP revised the proposed 1996 WVSWMR revisions to effect the changes the Joint Legislative Rulemaking Review Committee required. On March 9, 1996, W. Va. House Bill 4224 was passed by the W. Va. Legislature. Section 64-3-1(a) of that House Bill, a copy of which is included in Attachment 3, adopted and approved the entire 1996 revised WVSWMR, which included WVSWMR § 2.6, 2.43<sup>10</sup> and 7.2. Accordingly, the District Court's holding that those current Open Dumping provisions of the WVSWMR impermissibly conflict with the provisions of the WVSWA and the will and intent of the W. Va. Legislature must be rejected by this Court. This Court should reverse the District Court's holding that the WVSWMR is unenforceable and impermissibly in conflict with the provisions of the WVSWMA.

***5. Contrary to the District Court's holding, UCC's Filmont Dump Is Undeniably a Per-Se Public Nuisance under W. Va. Law Because It Is a Prohibited Open Dump under WVSWMR §§ 1.6 and 7.2 and, Therefore, an***

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<sup>10</sup> "Disposal" defined at section 2.40 in that bill, now is at 2.43; see W. Va. C.S.R. § 33-1-2.

***Instance of the “Improper – because It Is in this Instance Illegal – Disposal of Solid Waste” Expressly Declared to Be a Public Nuisance by the W. Va. Legislature in WVSWMA § 1(c)(1).***

Because it had incorrectly held that UCC’s Filmont Dump is not a prohibited and illegal “Open Dump” under the WVSWMR, the District Court held at p. 314 – 316 that Courtland could not prevail on its claims for Judicial Abatement of a Public Nuisance because it had failed to prove “any harm to the General Public requiring abatement. Because UCC’s Filmont Dump is undeniably a prohibited and illegal “Open Dump” under WVSWMR § 1.6, 2.84, 7.1 and 7.2 and clear instance of the “improper disposal of Solid Waste” declared a Public Nuisance by the W. Va. Legislature in WVSWMA § 1(c)(1), W. Va. Code § 22-15-1(c)(1), Filmont presents a “harm to the General Public” requiring abatement. In such a circumstance, where the Plaintiff has clearly established the existence of a condition expressly declared a Public Nuisance by W. Va. statute, regulation or ordinance, that condition constitutes a *Per-Se* Public Nuisance under W. Va. It must be abated in a manner determined appropriate by the Court. As a *Per-Se* Public Nuisance exists immediately adjacent to Courtland’s commercial real property in South Charleston, WV and is continuing to release Solid Waste, Leachate and Hazardous Substance into the surrounding environment manifestly establishes Courtland’s Special Injury (*i.e.*, a injury different in kind from the injury suffered by the Public as a whole because of the continuing endangerment of publicly owned natural resources) under

W. Va. law authorizing Courtland to seek judicial abatement. Courtland respectfully requests this Court to reverse the District Court and allow Courtland to obtain judicial abatement of the Public Nuisance condition presented and emanating from UCC's Open Dump.

**F. Courtland II: The District Court erred concluding that the West Virginia Voluntary Remediation Program is sufficient under RCRA to remedy the Filmont “Open Dump” without the Court entering an injunctive order.**

The District Court found that UCC's participation in the VRP “can be expected to result in an NCP-compliant clean up that seeks to prevent offsite migration of contaminants, UCC faces state disciplinary action if it exits the VRP, and permitting the VRP to run its course is consistent with RCRA's goal of enforcing RCRA compliance in conjunction with state programs that have been approved by the EPA. JA1349. This is so despite the fact that waste may remain in groundwater after completion of the VRP remedy, among other discrepancies. JA1361. Courtland challenges the District Court's rulings that (1) Courtland failed to demonstrate irreparable injury to itself or the public<sup>11</sup> and (2) that no injunctive relief is necessary because UCC entered into the VRP.

First, as discussed above, Courtland demonstrated injury to itself and the general public sufficient to warrant injunctive relief. The ongoing contamination of the

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<sup>11</sup> A reversal of that holding would also reverse the District Court's holding that there is no adequate remedy at law, which was specifically premised on that lack of proof of an irreparable injury. JA1348-JA1349.

environment surrounding Filmont and Massey is obvious harm or degradation to the public resources that requires abatement—as plainly evidenced, at a minimum, by finding Filmont is an Open Dump under RCRA. And the actual impacts and continued threat of impacts to Courtland’s property, an immediately adjacent neighbor to Filmont and Massey, for which Courtland has actually incurred costs of response, is an obvious special injury that differs not only in degree but in character from the injury inflicted upon the general public—comparable to public nuisance case law. Thus, an irreparable injury has been demonstrated.

Second, the District Court’s order demonstrates why the VRP is woefully insufficient as a remedy for the RCRA Open Dump found to exist by the District Court. The following discrepancies exist under the VRP:

- Participation is voluntary, regardless of whether there are purported state disciplinary actions if UCC withdraws; JA1349
- Even after the VRP is completed, there would likely still be “**waste in the groundwater at the Filmont/Massey facility**”; JA1356
- The process does not automatically turn the site into a sanitary landfill, as that term is used in RCRA; JA1356
- The VRP is not directly compliant with the National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”); JA1357, JA1359-JA1361

- The VRP provides only limited public participation; JA1361
- The VRP has yet to resolve the seep of leachate from Filmont which was the subject of the original unilateral enforcement order prior to UCC's entry into the VRP; JA1361
- The Court falls back on the claim that the VRP “would result in a manner that prevents any existing contaminants from migrating offsite,” and that it has the “aim” to prevent offsite migration and such seeps; JA1357, JA1361

Contrary to the District Court's findings, the proper remedy for a RCRA Open Dump is an injunctive order requiring that either the Open Dump be closed (*i.e.*, all solid waste in the facility be removed and disposed of lawfully) or that the Open Dump be timely upgraded to a Sanitary Landfill that fully complies with all of the federally-approved, applicable requirements of the WWSWMA. *See* RCRA §§ 4005(a), 7002(a), 42 U.S.C. §§ 6945(a), 6972(a); 40 C.F.R. § 256.23(c) and (d). Alternatively, an appropriate remedy would be an order requiring Corrective Action (*i.e.*, an appropriate Remedial Investigation and further Response Actions, if warranted) with respect to releases “from a solid waste landfill unit” pursuant to RCRA §§ 4010(c)(3)(C) and 7002(a)(1)(A). Such remedies focus on the facility itself.

With respect to the contamination at and emanating from Filmont (related by separately considered from the facility itself), the proper remedy is an injunction requiring UCC forthwith to undertake the investigation and remediation of Solid Waste, Leachate and Pollutants and Contaminants Released into the Environment at and from UCC's Filmont Open Dump pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan. 40 C.F.R., Part 300, including delineation of the vertical and horizontal extent of the contamination.<sup>12</sup>

The Solid Waste Management provisions of federal law are set forth in RCRA Subtitle D, 42 U.S.C. §§ 6941 – 6949a. The **only** legal relief authorized (and then only to state and local governments and private parties) by that federal statute is: **(1)** issuance of an Order Requiring Compliance with the applicable statutory prohibitions and requirement applicable to the solid waste management facility at issue pursuant to RCRA §§ 4005(a) and 7002(a)(1)(A); or **(2)** an Order requiring Corrective Action (*i.e.*, an appropriate Remedial Investigation and further Response Actions, if warranted) with respect releases “from a solid waste landfill unit” pursuant to RCRA §§ 4010(c)(3)(C) and 7002((a)(1)(A).

The District Court determined in the Phase I Trial that Filmont is a prohibited “Open Dump” pursuant to RCRA § 4005(a), 42 U.S.C. § 6945(a), and 40 C.F.R.

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<sup>12</sup> The specific details of these remedies were proposed to the District Court in Courtland's Proposed Permanent Injunction submitted to the Court after trial Phase II. JAXxxx [cite C-II, ECF no. 677]



§§ 257.1 and 257.3-4. The required remedy for any violation of the prohibition in RCRA Subtitle D of “Open Dumping” facilities and practices is an injunctive order requiring that the Open Dump forthwith be closed (*i.e.*, all solid waste in the facility be removed and disposed of lawfully) or that the Open Dump be timely upgraded to a sanitary landfill that fully complies with all of the federally-approved, applicable requirements of the W. Va. Solid Waste Management Act. *See* RCRA §§ 4005(a), 7002(a), 42 U.S.C. §§ 6945(a), 6972(a). Continuing in the VRP achieves neither of these goals, as demonstrated above (*i.e.*, waste will still be in groundwater after completion of the VRP and the VRP will not convert Filmont into a sanitary landfill).

Therefore, Courtland is entitled to a permanent injunction requiring UCC forthwith to bring its Filmont facility into compliance with RCRA § 4005(a) and the WVSWMA with respect to the waste disposed of at the Filmont Open Dump. The specific actions must include all activities to close Filmont pursuant to the requirements of RCRA and WVSWMA which require that: **(1)** all solid waste in the facility be removed and disposed of lawfully) or **(2)** the Filmont Open Dump be timely upgraded to a sanitary landfill that fully complies with all of the federally-approved, applicable requirements of the W. Va. Solid Waste Management Act.

Regarding contamination at and Emanating from Filmont, as noted above, Courtland is entitled to a permanent injunction requiring UCC to undertake the immediate investigation and remediation of Solid Waste, Leachate and Pollutants

and Contaminants Released into the Environment at and from UCC's Filmont Open Dump pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan. 40 C.F.R., Part 300,<sup>13</sup> including delineation of the vertical and horizontal extent of the contamination. Furthermore, UCC must take immediate steps to stop the spread of the contamination including enacting interim remedial measures to contain, extract, treat, and/or dispose of the hazardous materials leaking from Filmont, which actions are necessary to reduce the likelihood of human, animal, or food chain exposure and abate the public nuisance. This interim removal action should be conducted immediately, concurrently with the Remedial Investigation/Feasibility Study ("RI/FS") which will address the ultimate remedial activities to permanently remediate the site. In addition, Courtland should be authorized by the Court to conduct appropriate and reasonable monitoring of all response actions undertaken by UCC.

Accordingly, given that the VRP will not achieve these requirements, the District Court's ruling should be reversed.

**G. Courtland IV: The District Court erred in concluding that Appellant did not adduce evidence of stormwater discharges which actually have occurred from Filmont and Massey in the Northern Boundary Ditch.**

Specifically with respect to stormwater discharges from Filmont to the

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<sup>13</sup> An injunction under RCRA only accelerates the defendant's financial contribution that it is responsible for under CERCLA. *See Lincoln Props. v. Higgins*, CIV. No. S-91-760 DFL/GGH, 1993 U.S. Dist. LEXIS 1251, at \*57, \*59 (E.D. Cal. Jan. 18, 1993).

Northern Boundary ditch, the District Court made the preposterous, illogical ruling that “stormwater drainage features exist at Filmont which could channel stormwater into the Northern Boundary Ditch, no stormwater discharges into the ditch have been documented” and therefore held that UCC was not liable for any such discharges. JA2499-JA2500. The District Court made the same finding with respect to Massey: “a stormwater drainage feature exists at Massey, namely, a swale, which may channel stormwater into the Northern Boundary Ditch, but also that Courtland has failed to submit evidence showing that stormwater discharges have actually occurred in this manner in the past.” JA2500 (emphasis added). All of this is in spite of the evidence that led the District Court to also state that “[s]tormwater may be channeled to the Northern Boundary Ditch through several landscape features around Filmont,” that stormwater “**would tend** to drain into the [Northern Boundary] ditch,” (emphasis added), and “rain that falls on Massey predominately runs across the surface to Filmont, and some amount of runoff also flows towards the Northern Boundary Ditch.” JA2499-JA2500.

Further, Dr. Simonton testified that the Northern Boundary Ditch “conveys stormwater from Massey”—use of the active tense of the verb, not merely that it could convey. JA3742, JA3795. He also testified that a component of stormwater from Filmont goes to each the Northern and Southern ditches, JA3897-JA3899, and the same again for Massey. JA3908-JA3910.

Additionally, Dr. Brian Wellington, an expert witness for UCC, conducted stormwater modeling for the site, including “stormwater management systems,” and opined that at least some component of stormwater flows to the Northern Boundary Ditch. JA5640-JA5641, JA5698-JA5700.

To put a CWA citizen-suit plaintiff to task to document every single day of discharges of stormwater is unreasonable and not keeping with the spirit and intent of the law. Such a holding, despite the clear evidence described herein that could permit a finder of fact to make reasonable inferences of runoff and any number of reasonable means of estimating a specific number of days of runoff, is both an error of law and clear error or an abuse of discretion. The ruling should be reversed and remanded for consideration and calculation of an appropriate and reasonable number of estimated days of violations and corresponding civil penalty.

**H. Courtland IV: The District Court erred in its application of Civil Penalties for Union Carbide’s failure to obtain a permit under the Clean Water Act by only counting days of actual observed stormwater runoff instead of known days of stormwater runoff and abused its discretion by excluding certain evidence.**

Concerning stormwater discharges to the Southern Boundary Ditch, the District Court calculated the maximum possible amount of civil penalties based on just one single day of discharges (from three points at Filmont and Massey) based on only

one event at which Dr. Simonton testified to observing said discharges.<sup>14</sup> JA2924-JA2929. After analyzing potential mitigating factors, it settled on that maximum amount, imposing a civil penalty of \$200,136. JA2935.

This ruling is an error on multiple bases, as discussed below: (1) UCC should be held in violation for every day it operated these facilities without a permit, not just days it rained; (2) common sense and the evidence admitted at trial dictate that the ruling was clearly erroneous and an abuse of discretion; and (3) prejudicial error was committed by excluding certain rainfall data evidence from trial Phase II.

***1. UCC was in violation of the Clean Water Act every day it operated its facilities without a stormwater permit.***

First and foremost, the District Court erred in its application of the law by limiting the maximum civil penalty calculation to days of actual discharges (and further reduced that to days of **demonstrated** actual discharges) of stormwater associated with industrial activity. Rather, the maximum penalty should be based on the number of days of operation of the activity without a permit.

In 2023 Order, the District Court held in Courtland IV that UCC is in continuing violation of the requirements of CWA §§ 301(a) and 402(p), 33 U.S.C. §§ 1311(a) and 1342(p), by discharging stormwater associated with industrial

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<sup>14</sup> **Courtland IV Standing Appeal:** Courtland will not burden this Court with repeating its standing arguments with respect to discharges to the Northern Boundary Ditch, set forth in the Courtland III here in Courtland IV, but hereby incorporates its standing arguments at Courtland III (No. 23-2143(L), Dkt. No. 36, Appellant's Opening Brief, at 58-68) herein as if set forth in full.

activities at its Filmont Open Dump into waters of the United States without a permit, through a shallow drainage channel running along the facility's fence line north of the Southern Boundary Ditch and through the two Massey culverts, all of which collects and channels stormwater to the Southern Boundary Ditch, for at least the last 30 years or more, since the Clean Water Act first required such stormwater permits to be obtained. JA2477-JA2479 (ongoing violations found).

CWA § 402(p)(4)(A), 33 U.S.C. § 1342(p)(4)(A) requires that "Not later than 4 years after such date of enactment [enacted Feb. 4, 1987], the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit." Thus, UCC is liable for the above-stated violations for each and every day from February 4, 1991, to the present, for discharges from the south boundary ditch to Filmont and from **each** of the two culverts from Massey Rail Yard, totaling three violations **per day**. *See Molokai Chamber of Commerce v. Kukui (Molokai), Inc.*, 891 F. Supp. 1389, 1402 (D. Haw. 1995) (each day without a stormwater permit constitutes a violation); *see also Puget Soundkeeper Alliance v. Whitley Mfg.*, 145 F. Supp. 3d 1054, 1055-56 (W.D. Wa. 2015) (explanation of CWA § 402(p) general stormwater permit prohibition and related exclusions of stormwater discharges from specific industries or activities);

*Waltman v. King William Cty. Sch. Bd.*, Civil Action No. 3:10CV72-HEH, 2010 U.S. Dist. LEXIS 24093, at \*6-8 (E.D. Va. Mar. 16, 2010) (same).

“Citizen-plaintiffs may [prove at trial an ongoing violation] either (1) by proving violations that continue on or after the date the complaint is filed, or (2) by adducing evidence from which a reasonable trier of fact could find a continuing likelihood of a recurrence in intermittent or sporadic violations.” *Chesapeake Bay Found. v. Gwaltney of Smithfield*, 844 F.2d 170, 171-72 (4th Cir. 1988); JA2471-JA2472. Plaintiff established **ongoing violations** exist in the form of stormwater discharges from each Filmont and Massey. JA2477-JA2479 (“Courtland has thus proved an **ongoing violation** of the Act [from Filmont]”; “**such discharges [from the Massey culverts] have continued after the date this action was initiated** and are likely to recur in the future”) (emphasis added).

The ongoing nature of these three continuing violations shifts the burden on UCC to demonstrate when violations and discharges **did not** occur from its facilities. UCC failed to present any such evidence, and thus UCC should be held to be in a constant state of violation for not having a stormwater discharge permit, as articulated by the District of Hawaii *Molokai*, 891 F. Supp. at 1402:

[E]vidence submitted by Plaintiffs consist entirely of observations made before March 1994, the date Defendants allege that they added certain erosion control measures. While Plaintiffs have not submitted evidence of discharges occurring after March 1994, **neither have Defendants submitted sufficient evidence to satisfy this court that no discharge occurred after March**

**1994. See 33 U.S.C. § 1362(12) (a discharge is “any addition of any pollutant . . . .”) Because Defendants had no permit in place, only such evidence could eliminate the continuing nature of their violations under Gwaltney and Sierra Club v. Union Oil.**

\* \* \*

**Because of the continuing nature of the permit coverage violation discussed above, only the elimination of all factual disputes concerning the complete absence of any discharge or any chance of future discharge (under storm conditions, for example) would suffice to carry Defendants’ summary judgment burden here. They have not met this burden.**

In summary, violative discharges continue until Defendants obtain permit coverage and bring themselves into compliance with the permit requirements. Without permit coverage, discharges violate the Act; with permit coverage and compliance, they do not. . . . Even if construction had ceased and erosion control measures were in place, Defendants were in violation of the Act on July 11, 1994, failing proof of a complete absence of storm runoff. For these reasons, the court **finds that Defendants’ violation and responsibility are continuous until compliance**, and bringing about such compliance is exactly what the citizen suits under the Act are about. Gwaltney, 484 U.S. at 60 n.3 (“citizen suit is . . . an action for compliance . . . .”). Accordingly, Defendants have not met Gwaltney’s requirement of showing Plaintiffs’ allegations continuing violations to be shams, and as a result this court has subject matter jurisdiction over this citizen suit. **While at trial Defendants may be able to prove the complete absence of discharges, they have not done so here.**

(emphasis added). The Court in *Molokai* further opined on the policy arguments for finding such a defendant to be in a constant state of violation unless and until the Defendant can prove a lack of discharges:

Operating without a permit is a present, not a past violation. See Carr v. Alta Verde Industries, Inc., 931 F.2d 1055, 1062 (5th Cir. 1991) (A discharger operating without a permit “remains in a continuing state of violation until it either obtains a permit or no longer meets the definition of a point source.”).



Justice Scalia clarified the basis for this conclusion in his concurrence in Gwaltney, where he explained:

The phrase in § 505(a), “to be in violation,” unlike the phrase “to be violating” or “to have committed a violation,” suggests a state rather than an act -- the opposite of a state of compliance . . . . When a company has violated an effluent standard or limitation, it remains, for purposes of § 505(a), “in violation” of that standard or limitation so long as it has not put in place remedial measures that clearly eliminate the cause of the violation.

484 U.S. at 69 (Scalia J., concurring).

*Molokai*, 891 F. Supp. at 1400.

Moreover, an NPDES stormwater permit is not rainfall dependent—it is dependent on an industrial activity occurring at a facility, over which stormwater may flow and discharge. Such a permit is not issued based on anticipated number of days of rain—rather, it is required and issued based on the conduct of the industrial activity. Should no rainfall occur, whatsoever, for a period of time after the issuance of a permit, a permittee does not seek a refund for lack of rain and a corresponding lack of discharges. To the contrary, every day that a facility conducts qualifying industrial activity but fails to obtain an NPDES permit is a violation of the Clean Water Act. That is exactly the case here, where UCC conducted such activities at Filmont and Massey for decades without any NPDES permits.

Thus, UCC has been in a state of constant violation since the early 1990s and has failed to present any evidence to rebut that conclusion. The District Court's ruling should be reversed.

***2. Common sense as with NBD—clear error and abuse of discretion to limit to just days testified to.***

With respect to stormwater discharges to the Southern Boundary Ditch, similar to its holding for the Northern Boundary Ditch, the District Court made the equally preposterous, illogical ruling that UCC would only be assessed penalties based on one single day of discharges (from three points at Filmont and Massey) based on only one event that Dr. Simonton testified to observing said discharges. JA2924-JA2929. The District Court held this despite acknowledging, “it is evident to the court that unpermitted stormwater discharges have likely been occurring from the Filmont drainage channel and the Massey culverts for some time given that it has undoubtedly rained sufficiently to produce stormwater discharges on many occasions since 1991.” JA2928.

As noted above, requiring a CWA citizen-suit plaintiff to document every single day of discharges of stormwater is unreasonable and not keeping with the spirit and intent of the law. There is clear evidence described herein that could permit a finder of fact to make reasonable inferences of runoff and any number of reasonable means of estimating a specific number of days of runoff. The District Court erred. The

ruling should be reversed and remanded for consideration and calculation of an appropriate and reasonable number of estimated days of violations and corresponding civil penalty.

***3. The District Court abused its discretion in excluding rainfall evidence from Trial Phase II.***

Throughout trial Phase I, the District Court and the parties referred to Phase I as the “liability” phase and Phase II as the “damages” phase of trial. JA2552-JA2554. Courtland understood that to include additional presentation of evidence on certain issues, including CWA civil penalties and underlying evidence of historic rainfall data and expert opinion as to a particular number of days of discharges of stormwater from Filmont and Massey. Between trial Phase I and Phase II, the District Court pulled the rug out from under Courtland’s feet, as follows.

After the District Court issued its 2023 Order, it issued another order asking the parties for responses regarding the scope of discovery for trial Phase II. Courtland’s response included the following in the scope of proposed discovery for the issue of CWA civil penalties:

This issue requires designation of fact and expert witnesses concerning the factors set forth in 33 U.S.C. § 1319(d) as well as the nature of the continuous discharges and work performed by UCC to address the discharges at this and other sites, including before and after trial in this matter. After designation of such witnesses, they will also need to be deposed.

Courtland also seeks to issue written discovery requests targeted at these issues.

JA2535. Contrary to this request, the District Court ruled:

Given the parties' completion of pretrial discovery in these matters prior to the Pretrial Conference held on June 3, 2022, during which the court first bifurcated trial to proceed in two phases, the first being liability ("Phase I") and the second damages ("Phase II"), the court finds discovery has concluded on these issues.

JA2552.

Hence, Courtland was precluded from adducing new evidence—but Courtland already had placed rainfall evidence and expert opinion in the record in its filings prior to trial Phase I. In particular, Courtland submitted judicially noticeable government recorded historic rainfall data and corresponding expert opinion as to resulting stormwater discharges based on that data, all in opposition to UCC's motion for summary judgment. JA1801 (citing Simonton decl.), JA1812-JA1813 (Decl. of Dr. Simonton concerning rainfall events and stormwater runoff), JA1815 (public domain rainfall data from NOAA). UCC moved to strike the evidence, JA1841, but the District Court's order on UCC's summary judgment motion was silent as to the motion to strike. JA1874.

However, prior to trial Phase II, UCC filed (1) a **motion for adoption of a litigation plan** for trial Phase II and (2) two **motions in limine to exclude** evidence of rainfall data and Dr. Simonton's related opinion, similar to that cited above in Courtland's opposition to UCC's summary judgment motion. JA2555 (motion re litigation plan), JA2562 (first motion to exclude), JA2573 (second motion to exclude).

UCC's motion to adopt a litigation plan proposed that trial Phase II be limited in scope to hearing evidence on "remedies" (not "damages," as had been said before), but included "evidence as to both the injunctive relief remedy and any civil penalty to be assessed under the CWA." JA2557-JA2558. In Courtland's opposition to that motion, it pointed out to the District Court that calculation of the maximum CWA civil penalties would in part be "based on rainfall data and testimony already presented to the Court in prior summary judgment briefing and at trial phase I, and further such evidence to be presented at trial phase II." JA2599. On its face, UCC's motion does not appear to disagree.

Meanwhile, the District Court's ruling on UCC's motions in limine completed the bait and switch. Its first motion in limine was to exclude documents and witnesses "not admitted in Phase I trial on liabilities and not related to UCC's ongoing remediation work in the West Virginia Voluntary Remediation Program ("VRP"), which the Court determined to be the scope of discovery in Phase II." JA2562. The second motion was to exclude certain testimony from Dr. Simonton as outside of the scope of trial Phase II, including testimony of "stormwater run-off frequency." JA2573, JA2576.

The District Court bit. It granted both motions in limine to exclude evidence of NOAA rainfall records and Dr. Simonton's related opinions. JA2856-JA2857; JA5760-JA5762.

Thus, the exclusion of the judicially noticeable rainfall data and Dr. Simonton's related opinion, first from the scope of discovery for trial Phase II and then from admission into evidence during trial Phase II, are clearly an abuse of discretion in light of all the procedural and substantive facts described above. In fact, the District Court actually took judicial notice of similar NOAA rainfall data in a March 29, 2023, Order (after trial Phase I but six months before it issued its 2023 Order), which included data concerning at least four days of rainfall over 1.5 inches. JA2112-JA2114. At the very least, that would approximately quadruple the civil penalty amount assessed. But the District Court also chose to ignore this evidence in its 2024 Order.

## **VII. CONCLUSION:**

Accordingly, this Court should reverse the District Court's Judgment in favor of Appellee UCC in Courtland II and IV and remand the case with instructions that it proceed consistent with this Court's ruling.

## REQUEST FOR ORAL ARGUMENT

Appellant The Courtland Company requests that the Court hear oral argument on their appeal because of the complexity, novelty, and importance of the issues presented. *See* Fed. R. App. P. 34(a); Local Rule 34(a).

Respectfully submitted,

Date: January 27, 2025

/s/ *Michael O. Callaghan*

WV Bar No. 5509

NEELY & CALLAGHAN

1337 Virginia Street East, Suite 200

Charleston, WV 25301-3011

Telephone: (304) 343-6500

Facsimile: (304) 343-6528

mcallaghan@neelycallaghan.com

Counsel for Appellants

**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMIT**

No. 24-2077 (L)

*The Courtland Company, Inc. v. Union Carbide Corporation*

The foregoing OPENING BRIEF OF APPELLANT THE COURTLAND COMPANY, INC. complies with type-volume limits because, excluding the parts of the document exempted by Fed. R. App. R. 32(f) (cover page, disclosure statement, table of contents, table of authorities, statement regarding oral argument, signature block, certificates of counsel, addendum, attachments) the brief contains 19,992 words. *See* Fed. R. App. P. 32(a)(7)(B) & 32(f).

The foregoing brief also complies with the typeface and type style requirements because it was prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 14-point font. *See* Fed. R. App. P. 32(a)(5), 32(a)(6).

Date: January 27, 2025

/s/ *Michael O. Callaghan*

WV Bar No. 5509

NEELY & CALLAGHAN

1337 Virginia Street East, Suite 200

Charleston, WV 25301-3011

Telephone: (304) 343-6500

Facsimile: (304) 343-6528

mcallaghan@neelycallaghan.com

Counsel for Appellants



# ATTACHMENT 1

January 7, 1997

To: Judy Cooper

From: Larry Atha

Re: *Standard Numbering and Formatting for Technical  
Cleanup of Agency Rules*

Jan 17 3 23 PM '97

OFFICE OF WHEELING  
SECRETARY OF STATE

Enclosed is a copy of our revised rules (and a copy of a double density diskette in a 6.1 WordPerfect format) that reflect the performance of the subject functions. Those rules submitted at this time are as follows:

**Submitted Now*****I. Solid Waste Management.***

<u>Was</u>	<u>Is</u>	<u>Diskette Designation</u>
Title 47 Series 38	Title 33 Series 1	33-1sol.wst
Title 47 Series 38 (Appendix)	Title 33 Series 1 (Appendix)	33-1app.end
N/A	List of Changes	33-1list.chg

***II. Sewage Sludge Management.***

<u>Was</u>	<u>Is</u>	<u>Diskette Designation</u>
Title 47 Series 38D	Title 33 Series 2	33-2slud.ge
N/A	List of Changes	33-2list.chg

***III. Yard Waste Composting.***

<u>Was</u>	<u>Is</u>	<u>Diskette Designation</u>
Title 47 Series 38E	Title 33 Series 3	33-3yd.wst
N/A	List of Changes	33-3list.chg

***IV. Lead Acid Battery.***

<u>Was</u>	<u>Is</u>	<u>Diskette Designation</u>
Title 47 Series 38F	Title 33 Series 4	33-4acid.bat
N/A	List of Changes	33-4list.chg

***V. Waste Tire Management.***

<u>Was</u>	<u>Is</u>	<u>Diskette Designation</u>
Title 47 Series 38G	Title 33 Series 5	33-5tire.rul
N/A	List of Changes	33-5list.chg

69  
64

***VI. Commercial Solid Waste Landfill Closure Assistance Program.***

<u><i>Was</i></u>	<u><i>Is</i></u>	<u><i>Diskette Designation</i></u>
Title 47 Series 38C	Title 33 Series 40	33-40.lca
N/A	List of Changes	33-40lst.chg

**If you have comments or questions, please call me at 558-6350.**

47CSR38

Division of Environmental Protection.

“Beginning on page 1, in the title, and continuing throughout the text of the rule, by striking the title number ‘47’ and inserting in lieu thereof the title number ‘33’;

On page 1, in the title, by striking the words ‘WATER RESOURCES - WASTE MANAGEMENT’ and inserting in lieu thereof the words ‘OFFICE OF WASTE MANAGEMENT’;

Beginning on page 1, in the title, and continuing throughout the text of the rule, by striking the series number ‘38’ and inserting in lieu thereof the series number ‘1’;

Beginning on page 1, in subsection 1.1, and continuing throughout the text of the rule, by adding to the existing code reference ‘§22-15’ for clarity (e.g., on page 1 by adding ‘-1 et seq.’ to the existing ‘§22-15’ and therefore making ‘§22-15-1 et seq.’);

Beginning on page 1, in subdivision 1.1.1, and continuing throughout the text of the rule, by striking the existing subsection, subdivision, paragraph, subparagraph, part, subpart, item, or subitem, or cross-reference thereto, and inserting in lieu thereof, the corresponding number as specified in Table 153-6A; Text Breakdown, in ‘Title 153CSR6, (The Standard Size and Format for Rules and Procedures for Publication of the State Register or Parts of the Public Register), as amended effective June 7, 1996’ (e.g., on page 1 by striking ‘1.1.1.’ and by inserting in lieu thereof ‘1.1.a.’);

Beginning on page 1, in paragraph 1.1.1.d, and continuing throughout the text of the rule, by striking the word used to describe the existing cross-reference to sections, subsections, subdivisions, paragraphs, subparagraphs, parts, subparts, items, or subitems, and inserting in lieu thereof, the corresponding reference as specified in Table 153-6A; Text Breakdown, in ‘Title

153CSR6, (The Standard Size and Format for Rules and Procedures for Publication of the State Register or Parts of the Public Register), as amended effective June 7, 1996' (e.g., on page 1, in paragraph 1.1.1.d, by striking 'section' and inserting in lieu thereof 'subsection');

Beginning on page 1, subsection 1.5, and continuing throughout the text of the rule, by striking the rule reference '47CSR38' or other similar 'CSR' reference and inserting in lieu thereof the rule reference '33CSR1' or other similar 'CSR' reference;

Beginning on page 1, in subsection 1.5, and continuing throughout the rule, by striking the rule reference 'these regulations' and inserting in lieu thereof the words 'this rule';

Beginning on page 5, subsection 2.42, and continuing throughout the text of the rule, by striking the federal regulation reference '50 CFR 17' or other federal reference, and inserting in lieu thereof the federal regulation reference '50CFR17' or other CFR reference;

Beginning on page 9, in subsection 2.88, and continuing throughout section 2 of the rule, by correctly renumbering all misnumbered subsections and subdivisions';

On page 50, subparagraph 3.13.11.a.F, by striking the misspelled word 'data' and inserting in lieu thereof the word 'date';

Beginning on page 72, in subsection 4.1, and continuing throughout the rule, by striking the word 'sec.' And inserting in lieu thereof the word 'seq.';

Beginning on page 111, in paragraph 4.11.2.b, and continuing throughout the text of the rule, by striking the word 'chief' and inserting in lieu thereof the word 'director.'

Beginning on page 117, in subsection 4.11.5, and continuing throughout the text of the rule, by striking the word 'WV' and inserting in lieu thereof the word 'W.Va.'

**TITLE 47 33**  
**LEGISLATIVE RULE**  
**DIVISION OF ENVIRONMENTAL PROTECTION**  
**~~WATER RESOURCES - WASTE MANAGEMENT~~**  
**OFFICE OF WASTE MANAGEMENT**  
**SERIES 38 1**  
**SOLID WASTE MANAGEMENT RULE**

**~~§47-38-1: §33-1-1.~~ General.**

1.1. Scope and Purpose.

*add* This legislative rule establishes requirements for the siting (including location standards), financial assurance, installation, establishment, construction, design, groundwater monitoring, modification, operation, permitting, closure and post-closure care of any solid waste facility that processes, recycles, composts, transfers or disposes of solid waste pursuant to W. Va. Code §22-15-1 et seq. This rule applies to any person who owns or operates a solid waste facility or who is responsible for the processing, composting, recycling, transfer or disposal of solid waste, except for those recycling facilities exempted from permitting requirements as authorized by W. Va. Code §20-11-12.

~~1.1.1.~~ 1.1.a. Applicability.

~~1.1.1.a.~~ 1.1.a.1. Permittees or applicants of existing solid waste landfills (SWLFs), or portions thereof, that stopped receiving waste before the effective date of this rule must close their SWLF in accordance with the terms and conditions of their solid waste permit, order, and/or the laws, rules and regulations in place on the effective date of this rule, unless permit requirements are otherwise required by the director.

~~1.1.1.b.~~ 1.1.a.2. Permittees of existing SWLFs, or portions thereof, that initiate, or continue receiving waste after the effective date of this rule must comply with the terms and conditions of their existing solid waste permit, order, and additionally the laws, rules and regulations in place on the effective date of this

rule, unless said permit is modified by the director to include the requirements of this rule, or unless permit requirements are otherwise modified by the director.

~~1.1.1.c.~~ 1.1.a.3. Applicants for new SWLFs, and lateral expansions of existing SWLFs that are issued permits after the effective date of this rule must comply with the terms and conditions of that new solid waste permit, and/or the laws, rules and regulations, or order, in place on the effective date of this rule, unless otherwise required by the director.

~~1.1.1.d.~~ 1.1.a.4. The applicability requirements of this ~~section~~ paragraph do not apply to existing solid waste nondisposal solid waste facilities. These facilities must continue to comply with their existing permit and this rule, W. Va. Code §§22-15-1 et seq., 22-12-1 et seq., and 22-11-1 et seq. as applicable, until such time as the permit is subject to renewal, modification or other similar permitting function. New "nondisposal" facility applicants must apply for permits as required by, and in compliance with, this rule. *add*

1.2. Authority: W. Va. Code §§22-15-5, 22-15-10, 22-15-12, 22-15-13, and 22-15-14.

1.3. Filing Date: April 18, 1996.

1.4. Effective Date: June 2, 1996.

1.5. Amendment of Former Rule.

These This legislative rules rule amends 47CSR38; 33CSR1 the "Solid Waste Management Regulations" as filed and effective on May 1, 1990.

1.6. Lawful Disposal of Solid Waste Required.

Solid waste must be disposed, processed, stored, transferred, or recycled only at permitted solid waste facilities as described in this rule. Solid waste landfill facilities failing to satisfy this rule are considered open dumps, as defined in section 2 of this rule, and will be subject to the actions and penalties outlined in W. Va. Code §22-15-15.

1.7. Incorporation by Reference.

Whenever federal or state statutes, rules or regulations are incorporated into this rule by reference, the reference is to the statute, rule or regulation in effect on the date stipulated by ~~section subsection~~ 1.4 of this rule.

~~§47-38-2: §33-1-2.~~ Definitions.

Unless the context clearly requires a different meaning, all terms contained in this section are defined by their plain meaning. This section contains definitions for terms that appear throughout this rule.

2.1. "Access Road" means any road used for facility access, or for the hauling of solid waste to a solid waste facility, including internal or infrequently used access roads to all monitoring and treatment appurtenances or from a road that is under federal, state, or local authority.

2.2. "Act" means the "Solid Waste Management Act," as amended, W. Va. Code §22-15-1, et seq.

2.3. "Active Life" means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities performed in accordance with section 6 of this rule.

2.4. "Active Portion" means that part of a solid waste facility that has received or is

receiving wastes and/or has not been closed in accordance with section 6 of this rule.

2.5. "Airport" means any public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

2.6. "Applicant" means the person applying for a commercial solid waste facility permit or similar renewal permit and any person related to such person by virtue of common ownership, common management or family relationships as the director specifies, including the following: Spouses, parents and children and siblings.

2.7. "Approved Solid Waste Facility" means a solid waste facility or practice which has a valid permit under the Act or which is otherwise authorized to conduct solid waste activities under the Act.

2.8. "Aquifer" means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.

2.9. "Areas Susceptible to Mass Movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the SWLF, or a portion thereof, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluction, block sliding, and rock fall.

2.10. "Asbestos" means the asbestiform varieties of chrysotile (serpentine) crocidolite (riebeckite) (erocidolite), amosite (cummingtonite-grunerite), anthophyllite, tremolite and actinolite.

2.11. "Background Investigation Disclosure Statement" means a required statement, on a form prescribed by the director, filed by any person or persons who are an applicant, permittee, operator, owner or other person of a solid waste facility, containing all required information for the conductance of a background investigation.

2.12. "Backhauling" means the practice of using the same container to transport solid waste and to transport any substance or material used as food by humans, animals raised for human consumption or reusable item which may be refilled with any substance or material used as food by humans.

2.13. "Bird Hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

2.14. "Bond" means any performance bond or other form of financial assurance contemplated pursuant to W. Va. Code §22-15-12.

2.15. "Bulking Agent" means any material mixed and composted with sewage sludge.

2.16. "Bulky Goods" means large items of solid waste such as furniture, large automobile parts, water heaters, or other large, discarded appliances or metal products which are introduced to a solid waste landfill for disposal and whose large size precludes, or complicates their handling.

2.17. "Category I Nonfriable Material" means asbestos-containing materials such as packing, gaskets, asphalt roofing, and vinyl floor covering, containing one or more percent asbestos, which is not in poor condition and is not friable.

2.18. "Category II Nonfriable Material" means asbestos-containing materials such as transite siding, transite roofing, and brittle vinyl floor covering, containing one or more percent asbestos, which is not friable but likely to become

crumbled, pulverized, or reduced to powder during demolition or disposal.

2.19. "Chief" means the chief of the Office of Waste Management of the West Virginia Division of Environmental Protection or the chief's authorized representative.

2.20. "Class A Solid Waste Facility" means a commercial solid waste facility which handles an aggregate of between ten thousand (10,000) and thirty thousand (30,000) tons of solid waste per month. Class A facility includes two or more Class B solid waste landfills owned or operated by the same person in the same county, if the aggregate tons of solid waste handled per month by such landfills exceeds nine thousand nine hundred ninety-nine tons of solid waste per month.

2.21. "Class B Solid Waste Facility" means a commercial solid waste facility which receives or is expected to receive an average daily quantity of mixed solid waste equal to or exceeding one hundred (100) tons each working day, or serves or is expected to serve a population equal to or exceeding forty thousand (40,000) persons, but which does not receive solid waste exceeding an aggregate of ten thousand (10,000) tons per month. Class B facilities do not include construction/demolition facilities: Provided; That the definition of Class B facility may include such reasonable subdivisions or subclassifications as the director may establish by legislative rule proposed in accordance with the provisions of W. Va. Code §29A-1-1 et seq.

2.22. "Class C Solid Waste Facility" means a commercial solid waste facility which receives or is expected to receive an average daily quantity of mixed solid waste of less than one hundred (100) tons each working day, and serves or is expected to serve a population of less than forty thousand (40,000) persons. Class C solid waste facilities do not include construction/demolition facilities.

2.23. "Class D Solid Waste Facility" means



any solid waste facility for the disposal of only construction/demolition waste and shall not include the legitimate beneficial reuse of clean waste concrete/masonry substances for the purpose of structural fill or roadbase material. Such facilities are further defined as follows:

~~2.23.f.~~ 2.23.a. "Class D-1 Solid Waste Facility" means a commercial or noncommercial facility other than a Class D solid waste facility permitted pursuant to ~~section paragraph 3-16-5.d~~ 3.16.e.4.

2.24. "Class E Solid Waste Facility" means any solid waste facility for the purpose of recycling at which neither land disposal nor biological, chemical, or thermal transformation of solid waste occurs.

2.25. "Class F Solid Waste Facility" means any industrial solid waste disposal facility.

2.26. "Clean Water Act" or "CWA" means the "Federal Water Pollution Control Act," as amended; 33 U.S.C. §1251 et seq.

2.27. "Coal Combustion By-Products" means the residuals, including fly ash, bottom ash, bed ash, and boiler slag flue gas emission control waste produced by coal-fired or coal/gas-fired electrical or steam generating units. For non-electrical steam generating units burning a combination of solid waste and coal, a carbon monoxide (CO) level of less than or equal to one hundred parts per million (100 ppm) on a 24-hour average basis is required for the by-products to meet this definition. The carbon monoxide level must be calculated on a dry gas basis corrected to seven percent (7%) oxygen.

2.28. "Coal Combustion By-Product Facility" means a facility for the disposal of coal combustion by-products, including coal combustion by-product landfills and coal combustion by-product disposal surface impoundments, and does not include the legitimate beneficial use of coal combustion by-

products.

2.29. "Commercial Recycler" means any person, corporation or business entity whose operation involves the mechanical separation of materials for the purpose of reselling or recycling at least seventy percent (70%) by weight of the materials coming into the commercial recycling facility.

2.30. "Commercial Solid Waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential wastes.

2.31. "Commercial Solid Waste Facility" means any solid waste facility which accepts solid waste generated by sources other than the owner or operator of the facility and does not include an approved solid waste facility owned and operated by a person for the sole purpose of disposing of solid wastes created by that person or such person and other persons on a cost-sharing or nonprofit basis and does not include land upon which reused or recycled materials are legitimately applied for structural fill, road base, mine reclamation, and similar applications.

2.32. "Composite Liner" means a system consisting of two components; the upper component must consist of a minimum 60-mil high density polyethylene (HDPE) and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec. The HDPE component must be installed in direct and uniform contact with the compacted soil component.

2.33. "Composting" means the aerobic, thermophilic decomposition of natural constituents of solid waste to produce a stable, humus-like material.

2.34. "Composting Facility" means any solid waste facility processing solid waste by

composting, including sludge composting, organic waste or yard waste composting, but does not include a facility for composting solid waste that is located at the site where the waste was generated.

2.35. "Construction/Demolition Waste" means waste building materials, packaging, and grubbing waste, resulting from construction, remodeling, repair and demolition operations on houses, commercial and industrial buildings, pavements, including, but not limited to, wood, plaster, metals, asphaltic substances, bricks, blocks and concrete, other masonry materials, but does not include asbestos waste.

2.36. "Cover Material" means soil or other material, approved by the director and used in a controlled manner to cover solid waste at solid waste disposal facilities.

2.37. "Director" means the director of the West Virginia Division of Environmental Protection or such other person to whom the director has delegated authority or duties pursuant to ~~Article one, Chapter twenty-two of the W. Va. Code of West Virginia §22-1-1 et seq.~~, or the director's authorized representative. For the purpose of this rule, the term "director" also means the director of the West Virginia's solid waste permit program in the administration of sections 2002 and 4005 of RCRA.

2.38. "Disease Vectors" or "Vector" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.

2.39. "Displacement" means the relative movement of any two sides of a fault measured in any direction.

2.40. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent thereof may enter the environment or be emitted

into the air, or discharged into any waters, including groundwaters.

2.41. "Division" means the West Virginia Division of Environmental Protection or its designee.

2.42. "Endangered or Threatened Species" means any endangered or threatened species, as defined in ~~50 CFR Part 17~~ 50CFR17, of animal or plant and includes those species listed as endangered or threatened in ~~50 CFR Part 17~~ 50CFR17.

2.43. "Energy Recovery Incinerator" means any solid waste facility at which solid wastes are incinerated with the intention of using the resulting energy for the generation of steam, electricity or any other use not specified herein.

2.44. "Existing SWLF" means any solid waste landfill that deposits solid waste after the effective date established in ~~section~~ subsection 1.4 of this rule.

2.45. "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

2.46. "Floodplain" means the lowland and relatively flat areas adjoining waters of the state that may be inundated by the 100-year flood.

2.47. "Friable Asbestos" means any friable solid waste material containing more than one percent (1%) asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

2.48. "Gas Condensate" means the liquid generated as a result of gas recovery process(es) at the SWLF.

2.49. "Groundwater" means any water occurring in the zone of saturation beneath the seasonal high water table, or any perched water

zones, or water below the land surface in a zone of saturation.

2.50. "Holocene" means the most recent epoch of the Quaternary Period, extending from the end of the Pleistocene Epoch to the present.

2.51. "Household Waste" means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

2.52. "Incineration Technologies" means any technology that uses controlled flame combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains little or no combustible materials, regardless of whether the purpose is processing, disposal, electric or steam generation or any other method by which solid waste is incinerated.

2.53. "Incinerator" means an enclosed device using controlled flame combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains little or no combustible materials.

2.54. "Industrial Solid Waste" means any solid waste generated by manufacturing, or industrial processes that is not a hazardous waste regulated under subtitle "C" of RCRA. Such wastes may include, but are not limited to, waste resulting from factories, processing plants, refineries, fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; slaughter houses, mills, tanneries, electric power generating plants, mines, or mineral processing operations; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay and concrete products; textile manufacturing; transportation

equipment; and water treatment. This term does not include mining waste or oil and gas waste.

2.55. "Industrial Solid Waste Landfill" means any solid waste disposal facility which is owned, operated, or leased by an industrial establishment for the land disposal of industrial solid waste created by that person or such person and other persons on a cost-sharing or nonprofit basis. The term "industrial solid waste landfill" does not include land application units, surface impoundments, or injection wells.

2.56. "Infectious Medical Waste" means infectious medical waste which is capable of producing an infectious disease. Medical waste is considered capable of producing an infectious disease if it has been, or is likely to have been, contaminated by an organism likely to be pathogenic to healthy humans, if such organism is not routinely and freely available in the community, and such organism has a significant probability of being present in sufficient quantities and with sufficient virulence to transmit disease. For the purposes of this rule, infectious medical waste includes the following materials:

~~2.56-1:~~ 2.56.a. "Animal Carcasses, Body Parts, Bedding and Related Waste" means contaminated animal carcasses, body parts, and the bedding of animals that are known to have been exposed to infectious agents during research, the production of biologicals, or the testing of pharmaceuticals, or for any other reason.

~~2.56-2:~~ 2.56.b. "Blood and Blood Products" means liquid waste human blood and blood products in a free-flowing or unabsorbed state;

~~2.56-3:~~ 2.56.c. "Laboratory Wastes" means cultures and stocks of infectious agents and associated biologicals including, but not limited to, cultures from medical and pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, and

discarded live and attenuated vaccines;

~~2.56.4:~~ 2.56.d. "Cultures and Stocks of Microorganisms and Biologicals" means discarded cultures, stocks, specimens, vaccines and associated items likely to have been contaminated by an infectious agent, discarded etiologic agents, and wastes from the production of biologicals and antibiotics likely to have been contaminated by an infectious agent.

~~2.56.5:~~ 2.56.e. "Pathological Wastes" means human pathological wastes, including tissues, organs, body parts, and containers of body fluids exclusive of those fixed in formaldehyde or another fixative.

~~2.56.6:~~ 2.56.f. "Sharps" means discarded articles that may cause punctures or cuts and that have been used in animal or human patient care or treatment, or in pharmacies or medical, research, or industrial laboratories, including, but not limited to, hypodermic needles, syringes with attached needles, scalpel blades, lancets and broken glassware.

~~2.56.7:~~ 2.56.g. "Isolation Wastes" means wastes generated from the care of a patient who has or is suspected of having any disease listed as Class IV in "Classification of Etiologic Agents on the Basis of Hazard" published by the United States Centers for Disease Control.

~~2.56.8:~~ 2.56.h. "Other Infectious Wastes" includes, but is not limited to any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill of any infectious medical waste, and waste contaminated by or mixed with infectious medical waste.

2.57. "Karst Region" means a type of topography which is formed over limestone or dolomite by dissolution of the formation and is characterized by sinkholes, caves, and similar features.

2.58. "Karst Terranes" means areas where

karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

2.59. "Land Application" means the application of liquid wastes onto a soil surface or the incorporation of solid waste into the soil surface for treatment and disposal.

2.60. "Landfill" means any solid waste facility or part of one at which solid waste, or its residue after treatment, is intentionally used for disposal in or on land, at which solid waste will remain after closure. Such facility is situated, for the purposes of this rule, in the county where the majority of the spatial area of the facility is located. The term "landfill" does not include a land application unit, or injection well.

2.61. "Lateral Expansion" means a horizontal expansion of the waste boundaries of an existing SWLF.

2.62. "Leachate" means any liquid that has come into contact with, passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

2.63. "Lift" means the vertical thickness of compacted solid waste and the cover material immediately above it.

2.64. "Liner" means a continuous layer of natural or manmade materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of solid waste, any constituents of such waste, or leachate and which complies with this rule.

2.65. "Liquid Waste" means any waste material that is determined to contain "free

liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).

2.66. "Lithified Earth Material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include manmade materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

2.67. "Lower Explosive Limit" ("LEL") means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at twenty-five degrees centigrade (25 degrees C) and atmospheric pressure.

2.68. "Major Alluvial Aquifer" means an aquifer composed of alluvial materials located adjacent to West Virginia rivers, such as the Kanawha River, Little Kanawha River, and Ohio River as depicted on Groundwater Hydrology of the Minor Tributary Basins of those rivers.

2.69. "Major Domestic Use Aquifer" means an aquifer which serves as a domestic or public water supply serving at least an average of twenty-five (25) individuals per day for at least sixty (60) days per year, or which has at least fifteen (15) service connections.

2.70. "Major Modification" is a modification to an approved permit in which a major change to the permit is to occur as specified in section subsection 3.18 of this rule.

2.71. "Materials Recovery Facility" means any solid waste facility at which source-separated materials or materials recovered through a mixed waste processing facility are manually or mechanically shredded or separated for purposes of reuse and recycling, but does not include a composting facility.

2.72. "Maximum Horizontal Acceleration in Lithified Earth Material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

2.73. "Mixed Solid Waste" means solid waste from which materials sought to be reused or recycled have not been source-separated from general solid waste.

2.74. "Mixed Waste Processing Facility" means any solid waste facility at which materials are recovered from mixed solid waste through manual or mechanical means for purposes of reuse, recycling or composting.

2.75. "Municipal Solid Waste" means any household or commercial solid wastes as defined in this rule and any sludge from a waste treatment plant or a water supply treatment plant.

2.76. "Municipal Solid Waste Incineration" means the burning of any solid waste collected by any municipal or residential solid waste disposal company.

2.77. "New SWLF" means any solid waste landfill facility that has not received waste prior to the effective date established in section subsection 1.4 of this rule.

2.78. "Noncommercial Solid Waste Facility" means any approved solid waste facility owned and operated by a person for the sole purpose of disposing of solid wastes created by that person or such person and other persons on a cost-sharing or nonprofit basis.

2.79. "Office" means the Office of Waste Management of the West Virginia Division of Environmental Protection or its designee.

2.80. "Open Burning" means the combustion



of solid waste without:

~~2.80.1~~ 2.80.a. Control of combustion air to maintain adequate temperature for efficient combustion;

~~2.80.2~~ 2.80.b. Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and

~~2.80.3~~ 2.80.c. Control of the emission of the combustion products.

2.81. "Open Dump" means any solid waste disposal which does not have a permit under W. Va. Code §22-15-1 et seq., and is not otherwise authorized by an order of the director, or is in violation of state law; or where solid waste is disposed in a manner that does not protect the environment.

2.82. "Operator" means the person(s) responsible for the overall operation of a solid waste facility or part thereof.

2.83. "Operating Hours" means the predetermined period of time specified by the facility permit or other such approval by the director during which activities may be conducted at a solid waste facility. These activities are not limited to the actual process of disposal.

2.84. "Origin" means, for the purpose of ~~section~~ subsection 4.12 of this rule, the actual point or location of waste generation, and not the point or location of transfer or the transfer station.

2.85. "Owner" means the person(s) who owns a solid waste facility or part thereof.

2.86. "Perennial Stream" means a stream or a portion of a stream that flows continuously or that under normal conditions supports aquatic life whose life history requires residence in flowing water for a continuous period of at least six (6) months.

~~2.88. 2.87.~~ "Permittee" means any person holding a permit or who is otherwise authorized to conduct solid waste activities under the Act.

~~2.89. 2.88.~~ "Persistent Violation" means any violation of the Act, this rule, any permit term or condition, or any order of this rule which is identified during two or more consecutive inspections performed by the director.

~~2.90. 2.89.~~ "Person," or "Persons," means:

~~2.90.1. 2.89.a.~~ Any industrial user, public or private corporation, institution, association, firm, or company organized or existing under the laws of this or any other state or country;

~~2.90.2. 2.89.b.~~ The State of West Virginia;

~~2.90.3. 2.89.c.~~ Any governmental agency, including federal facilities;

~~2.90.4. 2.89.d.~~ Any political subdivision of this State, including county commission, municipal corporation, industry, sanitary district, public service district, drainage district, soil conservation district, or watershed improvement district;

~~2.90.5. 2.89.e.~~ Any partnership, trust, or estate;

~~2.90.6. 2.89.f.~~ Any person or individual;

~~2.90.7. 2.89.g.~~ Any group of persons or individuals acting individually or as a group; or

~~2.90.8. 2.89.h.~~ Any legal entity whatever.

~~2.91. 2.90.~~ "Petroleum" means petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 lbs. per square inch absolute) and pipeline liquids. The term includes any refined petroleum products.

~~2.92.~~ 2.91. "Petroleum-Contaminated Soil" means any soil, dirt, rock or other earthen material which contains more than a de minimis (100 ppm of total petroleum hydrocarbons or less) amount of petroleum and which is not a hazardous waste.

~~2.93.~~ 2.92. "Point Source" means any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel, floating craft, or system, or landfill leachate collection system from which pollutants are or may be discharged to the waters of the State.

~~2.94.~~ 2.93. "Poor Foundation Conditions" means those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of a SWLF.

~~2.95.~~ 2.94. "Post-Closure" means activities after the closure of a solid waste facility which are necessary to ensure compliance with the provisions of the Act and any rules promulgated thereunder including the application of final cover, grading, revegetation, groundwater monitoring, surface water monitoring, gas monitoring and control, leachate treatment, erosion control, and the abatement of any pollution or degradation to land, water, air, or other natural resources.

~~2.96.~~ 2.95. "Publicly-Owned Treatment Works" or "POTW" means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality as defined by the Clean Water Act. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

~~2.97.~~ 2.96. "Q.A./Q.C." means "quality assurance and quality control."

~~2.98.~~ 2.97. "Qualified Groundwater Scientist"

is a scientist or engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certification(s), or completion of accredited university programs that enable that individual to make sound professional judgements regarding groundwater monitoring, contaminant fate and transport, and corrective action.

~~2.99.~~ 2.98. "Receiving Hours" means the period of time designated by the facility solid waste permit, or otherwise approved by the director within the operating hours that the solid waste facility accepts solid waste for disposal.

~~2.100.~~ 2.99. "Recycle" means the process by which recovered products are transformed into new products and includes the collection, separation, recovery and sale, or reuse of metals, glass, paper, and other materials.

~~2.101.~~ 2.100. "Recycling Facility" means any solid waste facility for the purpose of recycling at which neither land disposal nor biological, chemical, or thermal transformation of solid waste occurs: Provided, That mixed waste recovery facilities, sludge processing facilities and composting facilities are not considered recycling facilities nor considered to be reusing or recycling solid waste within the meaning of W. Va. Code §§22-15-1 et seq., 22C-4-1 et seq., and 20-11-1 et seq.

~~2.102.~~ 2.101. "Regulated Hazardous Waste" means a solid waste that is a hazardous waste, as defined in ~~40 CFR 261.3~~ 40CFR261.3, that is not excluded from regulation as a hazardous waste under ~~40 CFR 261.4(b)~~ 40CFR261.4(b) or was not generated by a conditionally exempt small quantity generator as defined in ~~40 CFR 261.5~~ 40CFR261.5.

~~2.103.~~ 2.102. "Resource Recovery Facility" means any solid waste facility at which solid

wastes are physically, mechanically, biologically, chemically, or thermally transformed for the purpose of separating, removing, or creating any material or energy for reuse or sale and at which land disposal of solid waste does not occur. Resource recovery facilities include incinerators equipped with integral or separate heat recovery systems, and other such solid waste facilities not herein specified, but does not include sewage sludge processing facilities.

~~2-104.~~ 2.103. "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

~~2-105.~~ 2.104. "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

~~2-106.~~ 2.105. "Salvage" means, but is not limited to, scrap copper, brass, rope, rags, paper, rubber, junked, dismantled, or wrecked machinery, machine or motor vehicles or any parts thereof; or iron, steel and other scrap ferrous or nonferrous materials.

~~2-107.~~ 2.106. "Salvage Yard" means any facility which is maintained, operated or used for the storing, buying, selling or processing of salvage materials or for the operation and maintenance of a motor vehicle graveyard, at which only mechanical processing of solid waste takes place and where no solid waste is disposed of on-site.

~~2-108.~~ 2.107. "Saturated Zone" means that part of the earth's crust in which all voids are filled with water.

~~2-109.~~ 2.108. "Scale" or "Scale House" means the area of the facility where waste initially enters the premises and the total and tare weights are determined and a receipt of deposit is generated.

~~2-110.~~ 2.109. "Schedule of Compliance" or "Compliance Schedule" means a list of activities

approved or ordered by the director, which may include dates or specified times for completion of each or all activities which, when completed, will result in a site, facility, or practice which is environmentally sound and conforms to the requirements of the Act, this rule, or permit terms and conditions.

~~2-111.~~ 2.110. "Seismic Impact Zone" means an area with a ten percent (10%) or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull will exceed 0.10g in a 250-year period.

~~2-112.~~ 2.111. "Sewage" means water-carried human or animal wastes from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface waters as may be present.

~~2-113.~~ 2.112. "Sewage Sludge" means any solid, semi-solid or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage, scum or solids removed in primary, secondary or advanced wastewater treatment processes and a material derived from sewage sludge. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator.

~~2-114.~~ 2.113. "Sewage Sludge Processing Facility" it is a solid waste facility that processes sewage sludge for land application, incineration or disposal at an approved landfill. Such processes include, but are not limited to, composting, lime stabilization, thermophilic digestion and anaerobic digestion.

~~2-115.~~ 2.114. "Sludge" means any solid, semi-solid, or liquid waste, or residue, or precipitate, generated from, or separated from or created by a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar origin,



exclusive of the treated effluent from a wastewater treatment plant.

~~2-116.~~ 2.115. "Solid Waste" means any garbage; paper; litter; refuse; cans; bottles; waste processed for the express purpose of incineration; sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility; and other discarded materials, including carcasses of any dead animal or any other offensive or unsightly matter; solid, liquid, semisolid, or contained liquid or gaseous material resulting from industrial, commercial, mining, agricultural operations, and community activities. The term "solid waste" does not include:

~~2-116.1.~~ 2.115.a. Solid or dissolved materials in domestic sewage;

~~2-116.2.~~ 2.115.b. Solid or dissolved materials in irrigation return flows;

~~2-116.3.~~ 2.115.c. Industrial discharges that are point sources and have permits under W. Va. Code §22-11-1 et seq.; or subject to permit under 33 U.S.C. 1342;

~~2-116.4.~~ 2.115.d. Source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, (68 Stat 923) including any nuclear or by-product material considered by federal standards to be below regulatory concern;

~~2-116.5.~~ 2.115.e. A hazardous waste either identified or listed under W. Va. Code §22-18-1 et seq.;

~~2-116.6.~~ 2.115.f. Refuse, slurry, overburden, or other wastes or material -- resulting either from coal-fired electric power or steam generation, or from the exploration, development, production, storage, and/or recovery of coal, oil and gas and/or other mineral resources -- that are placed or disposed of at a facility which is regulated under W. Va. Code §§22-2-1 et seq., 22-3-1 et seq., 22-4-1 et seq., 22-6-1 et seq., 22-7-

1 et seq., 22-8-1 et seq., 22-9-1 et seq., 22-10-1 et seq., 22A-1-1 et seq., 22C-2-1 et seq., 22C-7-1 et seq., 22C-8-1 et seq., or 22C-9-1 et seq., so long as such placement or disposal is in conformance with a permit issued pursuant to such chapters; and

~~2-116.7.~~ 2.115.g. Materials which are recycled by being used or reused in an industrial process to make a product, as effective substitutes for commercial products, or are returned to the original process as substitutes for raw material feedstock.

~~2-117.~~ 2.116. "Solid Waste Disposal" means the practice of disposing of solid waste including placing, depositing, dumping, or throwing or causing to be placed, deposited, dumped, or thrown any solid waste.

~~2-118.~~ 2.117. "Solid Waste Disposal Shed" means the geographical area which the solid waste management board designates and files in the State Register pursuant to W. Va. Code §22C-3-9.

~~2-119.~~ 2.118. "Solid Waste Disposal Surface Impoundment" means a natural depression or manmade excavation or diked area that is designed for the disposal of solid waste containing free liquids and that is not an injection well, landfill, land application unit, or a surface impoundment as defined in section 2 of this rule.

~~2-120.~~ 2.119. "Solid Waste Facility" means any system, facility, land, contiguous land, improvements on the land, structures, or other appurtenances or methods used for processing, recycling, or disposing of solid waste including landfills, solid waste disposal surface impoundments, transfer stations, incinerators, recycling facilities, material's recovery facilities, mixed waste processing facilities, sewage sludge processing facilities, composting facilities and other such facilities not herein specified, but not including land upon which sewage sludge is applied in accordance with W. Va. Code §22-15-20(b). Such facility is deemed to be situated, for

purposes of this rule, in the county where the majority of the spatial area of such facility is located: Provided, That a salvage yard, licensed and regulated pursuant to the terms of W. Va. Code §17-23-1 et seq., is not a solid waste facility.

~~2-121:~~ 2.120 "Solid Waste Landfill Facility (SWLF)" means a discrete area of land, or portion thereof, or an excavation that receives household waste, and that is not a land application facility, surface impoundment, injection well, or waste pile. A SWLF may also receive other types of RCRA subtitle D solid wastes, such as commercial solid wastes, nonhazardous sludge, small quantity generator wastes, and industrial solid wastes. Such a landfill may be a new SWLF, an existing SWLF, or a lateral expansion publicly or privately owned.

~~2-122:~~ 2.121 "Solid Waste Facility Operator" means any person or persons possessing or exercising operational, managerial or financial control over a commercial solid waste facility, whether or not such person holds a certificate of convenience and necessity or a permit for such facility.

~~2-123:~~ 2.122 "State Water Pollution Control Act" means W. Va. Code §22-11-1 et seq.

~~2-124:~~ 2.123 "Source-Separated Materials" means materials separated from general solid waste at the point of origin for the purpose of reuse and recycling but does not mean sewage sludge.

~~2-125:~~ 2.124 "Storage" or "Storage Area" means the interim storage of solid waste, at a permitted solid waste facility on a temporary basis. Any storage that exceeds one hundred eighty (180) days, without the prior written approval of the director, in such a manner, constitutes illegal disposal of such solid waste (i.e., staging areas).

~~2-126:~~ 2.125 "Structural Components" means

liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the SWLF that is necessary for protection of human health and the environment.

~~2-127:~~ 2.126 "Structural Fill" means an engineered/designed and controlled homogeneous fill with a projected spread in lifts not exceeding twelve (12) inches and compacted with proper power equipment. The material must be compacted in horizontal lifts to achieve the required design dry density and in-situ strength.

~~2-128:~~ 2.127 "Surface Impoundment" means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area that is designed to hold an accumulation of contaminated surface runoff or leachate or both.

~~2-129:~~ 2.128 "Transfer Station" means a combination of permanent structures, machinery, or devices at a place or facility where solid waste is taken from collection vehicles, often compacted, and prepared for shipment in other transportation units for movement to another solid waste management facility. Provided that, when solid waste is collected in a container including rolloffs, green boxes or bins which are temporarily positioned (not more than five days) at a specific location for transport by a transportation unit, such shall not be considered a transfer station. Leachate must be properly managed under either described activity.

~~2-130:~~ 2.129 "Unstable Area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements and karst terranes.

~~2-131:~~ 2.130 "Uppermost Aquifer" means the geologic formation nearest the natural ground

surface that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's permit boundary.

~~2.132.~~ 2.131. "Uppermost Significant Aquifer" means the first, uppermost aquifer encountered which is laterally persistent under the entire site and is free flowing throughout the year. This defines the aquifer which flows all twelve (12) months of the year and can be encountered under any given point on the permitted site.

~~2.133.~~ 2.132. "USGS" means the "United States Geological Survey."

~~2.134.~~ 2.133. "Washout" means the carrying away of solid waste by waters of the base flood.

~~2.135.~~ 2.134. "Waste Management Facility Boundary" means a vertical surface located at the hydraulically downgradient limit of the facility. This vertical surface extends down into the uppermost aquifer.

~~2.136.~~ 2.135. "Water Resources," "Water," or "Waters" means any and all water on or beneath the surface of the ground, whether percolating, standing, diffused or flowing, wholly or partially within this state, or bordering this state and within its jurisdiction, and includes, without limiting the generality of the foregoing, natural or artificial lakes, rivers, streams, creeks, branches, forks, brooks, ponds (except farm ponds, industrial settling basins and ponds and water treatment facilities), impounding reservoirs, springs, wells, watercourses, and natural wetlands.

~~2.137.~~ 2.136. "Wetlands" mean those naturally occurring areas, as defined under ~~40 CFR 232.2(r)~~ 40CFR232.2(r) that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that, under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

~~2.138.~~ 2.137. "7Q10" means the seven (7) consecutive day drought flow with a ten (10) year return frequency.

~~2.139.~~ 2.138. "100-Year Flood" means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equaled or exceeded once in 100 years on the average, over a significantly long period of time.

### ~~§47-38-3.~~ §33-1-3. Solid Waste Facility Permitting Requirements.

#### 3.1. Prohibitions.

No person may establish, construct, operate, maintain, or allow the use of property for a solid waste facility within an area where there is a reasonable probability that the facility will cause any of the following:

##### ~~3.1.1.~~ 3.1.a. Natural Wetlands.

A significant adverse impact upon natural wetlands, as defined in section 2 of this rule;

##### ~~3.1.2.~~ 3.1.b. Endangered or Threatened Species.

A significant adverse impact upon, or jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of a critical habitat of any animal or plant protected under the Endangered Species Act of 1973, and violates any requirement under the Marine Protection, Research and Sanctuaries Act of 1972 for the protection of a marine sanctuary, unless specifically approved by the United States Fish and Wildlife Service;

##### ~~3.1.3.~~ 3.1.c. Surface Water.

A significant adverse impact upon any surface water;

~~3.1.4.~~ 3.1.d. Groundwater.

A significant adverse impact upon groundwater quality;

~~3.1.5.~~ 3.1.e. Compliance with other agency requirements.

~~3.1.5.a.~~ 3.1.e.1. A permittee must comply with any and all applicable federal and state laws, rules, regulations or other requirements.

~~3.1.5.a.A.~~ 3.1.e.1.A. Permittees of SWLFs must not: Cause a discharge of pollutants into waters of the state, including natural wetlands, that violates any requirement of the Clean Water Act, as amended or applicable portions of W. Va. Code §22-11-1 et seq., ~~of the Code of West Virginia~~, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402; of the Clean Water Act, or as reflected in W.Va. Code §22-1-1 et seq., as amended.

~~3.1.5.a.B.~~ 3.1.e.1.B. Cause the discharge of a non-point source of pollution to waters of the state, including natural wetlands, that violates any requirements of an area-wide or state-wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, or as reflected in W. Va. Code §22-11-1 et seq., as amended.

~~3.1.5.a.C.~~ 3.1.e.1.C. Cause the discharge of a point source of pollution to waters of the State, in violation of surface water quality standards found in §22-11 -1 et seq. or any rules or regulations promulgated thereunder; or

~~3.1.5.a.D.~~ 3.1.e.1.D. A violation of the Groundwater Protection Act; W. Va. Code §22-12-1 et seq.

~~3.1.6.~~ 3.1.f. Explosive Gases.

Cause the generation by any facility and subsequent migration and concentration of methane or other explosive gases in any facility structure, excluding the leachate collection system or gas control or recovery system components, or in the soils or air at or beyond the facility property boundary in excess of twenty-five percent (25%) of the lower explosive limit for such gases at any time; or

~~3.1.7.~~ 3.1.g. Air Pollution.

The emission of any air contaminant exceeding the limitations for those substances as set by the West Virginia Division of Environmental Protection, Office of Air Quality.

3.2. Location Standards.

Unless otherwise approved by the director in writing, a person must not establish, construct, operate, maintain, or allow the use of property for a landfill in the following areas:

(Note: All distance measurements prescribed in ~~section~~ subsection 3.2 of this rule refer to distances as measured from the edge of the waste management unit boundary of a facility.)

~~3.2.1.~~ 3.2.a. Location Standards for Surface Water.

~~3.2.1.a.~~ 3.2.a.1. No SWLF may be located within three hundred (300) feet of any surface water (facility drainage or sedimentation control structures are exempt from this distance calculation);

~~3.2.2.~~ 3.2.b. Location Standards for Natural Wetlands.

No SWLF may be located within three hundred (300) feet of any natural wetlands, unless the permittee can make the following demonstrations to the director (facility drainage or sedimentation control structures are exempt from this distance calculation):

~~3.2.2.a. 3.2.b.1.~~ Where applicable under section 404 of the Clean Water Act or applicable wetland laws under W. Va. Code §22, ~~Article 11 §22-11-1 et seq.~~, or any rules promulgated thereunder, the presumption that a practicable alternative to the proposed landfill is available which does not involve natural wetlands is clearly rebutted:

~~3.2.2.b. 3.2.b.2.~~ The construction and operation of the SWLF must not:

~~3.2.2.b.A. 3.2.b.2.A.~~ Cause or contribute to violations of any applicable state water quality standard;

~~3.2.2.b.B. 3.2.b.2.B.~~ Violate any applicable W. Va. Code §22-11-1 et seq., and/or other toxic effluent standard or prohibition under section 307 of the Clean Water Act or as reflected in W.Va. Code §22-11-1 et seq., as amended;

~~3.2.2.b.C. 3.2.b.2.C.~~ Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; and

~~3.2.2.b.D. 3.2.b.2.D.~~ Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

~~3.2.2.e. 3.2.b.3.~~ The SWLF must not cause or contribute to significant degradation of natural wetlands, and the permittee must also demonstrate the integrity of the SWLF and its ability to protect ecological resources by addressing the following factors:

~~3.2.2.e.A. 3.2.b.3.A.~~ Erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the SWLF;

~~3.2.2.e.B. 3.2.b.3.B.~~ Erosion,

stability, and migration potential of dredged and fill materials used to support the SWLF;

~~3.2.2.e.C. 3.2.b.3.C.~~ The volume and chemical nature of the waste managed in the SWLF;

~~3.2.2.e.D. 3.2.b.3.D.~~ Impacts upon fish, wildlife, and other aquatic resources and their habitat from any release of the solid waste, or the leachate thereof;

~~3.2.2.e.E. 3.2.b.3.E.~~ The potential effects of catastrophic releases of waste or the leachate thereof, to the natural wetlands and the resulting impacts on the environment; and

~~3.2.2.e.F. 3.2.b.3.F.~~ Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

~~3.2.2.e.G. 3.2.b.3.G.~~ To the extent required under section 404 of the Clean Water Act or applicable state natural wetlands laws as reflected in W. Va. Code §22-11-1 et seq., as amended, steps must have been taken to attempt to achieve no net loss of natural wetlands (as defined by acreage and function) by first avoiding impacts to natural wetlands to the maximum extent practicable as required by ~~section paragraph 3.2.2.a 3.2.b.1~~ of this rule, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded natural wetlands or creation of manmade natural wetlands).

~~3.2.3. 3.2.c.~~ Perennial Stream Location Standards;

No SWLF may be located within the watercourse of a perennial stream;

~~3.2.4. 3.2.d.~~ Location Standards for



## Floodplains.

~~3-2.4.a.~~ 3.2.d.1. Permittees of new SWLFs, existing SWLFs and lateral expansions located in a 100-year floodplains must demonstrate that the SWLF does not, and will not:

~~3-2.4.a.A.~~ 3.2.d.1.A. Restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or

~~3-2.4.a.B.~~ 3.2.d.1.B. Result in a washout of solid waste so as to pose a hazard to human health and/or the environment.

~~3-2.5.~~ 3.2.e. Location Standards for Highways and Public Parks.

New SWLFs and lateral expansions must not be located within one thousand (1,000) feet of the nearest edge of the right-of-way of any state highway, interstate, federal aid primary or federal aid secondary, or county highway, or the boundary of any public park unless the facility is screened by natural objects, plantings, fences, or other appropriate means so that it is not readily visible from the highway or park;

~~3-2.6.~~ 3.2.f. Location Standards for Fault Areas.

~~3-2.6.a.~~ 3.2.f.1. New SWLFs and lateral expansions must not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time (i.e., during the last eleven thousand years);

~~3-2.6.b.~~ 3.2.f.2. Unless the permittee demonstrates to the director in a permit application that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the SWLF and will be protective of human health and the environment.

~~3-2.7.~~ 3.2.g. Location Standards for Airport Safety.

~~3-2.7.a.~~ 3.2.g.1. Permittees of new SWLFs, existing SWLFs, and lateral expansions must not be located within ten thousand (10,000) feet (3,048 meters) of any portion of the airport runway used or planned to be used by turbojet aircraft or within five thousand (5,000) feet (1,524 meters) of any portion of the airport runway used or planned to be used only by piston-type aircraft or within other areas where a substantial bird hazard to aircraft would be created; unless such applicants demonstrate that the SWLFs are designed and operated so that the SWLF does not and will not pose a bird hazard to aircraft.

~~3-2.7.b.~~ 3.2.g.2. Permittees proposing to site new SWLFs and lateral expansions located within a five-mile radius of any portion of an airport runway used by turbojet or piston-type aircraft must provide written notification to both the affected airport and the Federal Aviation Administration (FAA), and provide copies of the same to the director.

~~3-2.8.~~ 3.2.h. Location Standards for Dwellings.

~~3-2.8.a.~~ 3.2.h.1. Permittees of new SWLFs, and lateral expansions must not be located within five hundred (500) feet of a dwelling that is, or will be occupied, at the time of initial facility siting, unless written permission is received from the owner of the dwelling;

~~3-2.9.~~ 3.2.i. Location Standards for Wells.

~~3-2.9.a.~~ 3.2.i.1. Permittees of new SWLFs, existing SWLFs, and lateral expansions cannot be located within twelve hundred (1,200) feet of any public or private water supply well in existence at the time of initial facility siting;

~~3-2.10.~~ 3.2.j. Location Standards for Unstable Areas.

~~3-2.10.a.~~ 3.2.j.1. Permittees of new SWLFs, existing SWLFs, and lateral expansions

cannot be located within one thousand (1,000) feet of any area considered by the director to be unstable due to extreme geologic and hydrologic conditions (e.g., immature to maturely developed karst terrain, solution cavities), unless the permittee can demonstrate that engineering measures have been incorporated into the SWLF's design to ensure that the integrity of the structural components of the SWLF will not be disrupted, and

~~3.2.10.b.~~ 3.2.j.2. The Permittee must consider the following factors, at a minimum, when determining whether an area is unstable:

~~3.2.10.b.A.~~ 3.2.j.2.A. On-site or local soil conditions that may result in significant differential settling;

~~3.2.10.b.B.~~ 3.2.j.2.B. On-site or local geologic or geomorphologic features; and

~~3.2.10.b.2.C.~~ 3.2.j.2.C. On-site or local human-made features or events (both surface and subsurface).

~~3.2.11.~~ 3.2.k. Location Standards for Underground Mines.

~~3.2.11.a.~~ 3.2.k.1. Permittees of new SWLFs, and lateral expansions cannot be located above underground mine workings or within the critical angle of draw of such workings, unless otherwise approved by the director in writing;

~~3.2.12.~~ 3.2.l. Location Standards for Surface Mines.

Permittees of new SWLFs, and lateral expansions cannot be located within previously surface mined areas, unless otherwise approved by the director in writing.

~~3.2.13.~~ 3.2.m. Location Standards for Seismic Impact Zones.

New SWLFs and lateral expansions must not

be located in seismic impact zones, unless the permittee demonstrates to the Director that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

~~3.2.14.~~ 3.2.n. Location Standards for Air Criteria.

~~3.2.14.a.~~ 3.2.n.1. All permittees must ensure that violations of the applicable requirements developed under a State Implementation Plan (SIP) promulgated pursuant to section 110 of the Clean Air Act, as amended or as reflected in the rules promulgated by the Office of Air Quality, do not occur.

~~3.2.14.b.~~ 3.2.n.2. Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, landclearing debris, diseased trees, or debris from emergency cleanup operations, except as approved by the Office of Air Quality, is prohibited at all SWLFs.

~~3.2.15.~~ 3.2.o. Recordkeeping.

The permittee must retain a copy of all such demonstrations for location standards that have previously received the written approval of the director pursuant to this ~~section~~ subdivision in the facility operating record, as required by ~~section~~ subsection 4.4 of this rule.

3.3. Approvable Facilities.

~~3.3.1.~~ 3.3.a. Approvable Solid Waste Facilities.

Solid waste facilities for which approval may be granted include the following, or any combination thereof:

~~3.3.1.a.~~ 3.3.a.1. Class A Solid Waste Facility;

~~3.3.1.b.~~ 3.3.a.2. Class B Solid Waste Facility;

~~3.3.1.c.~~ 3.3.a.3. Class C Solid Waste Facility;

~~3.3.1.d.~~ 3.3.a.4. Class D Solid Waste Facility;

~~3.3.1.e.~~ 3.3.a.5. Class E Solid Waste Facility;

~~3.3.1.f.~~ 3.3.a.6. Class F Solid Waste Facility;

~~3.3.1.g.~~ 3.3.a.7. Sewage Sludge Processing Facility;

~~3.3.1.h.~~ 3.3.a.8. Yard Waste Composting Facility;

~~3.3.1.i.~~ 3.3.a.9. Mixed Waste Processing Facility; and/or

~~3.3.1.j.~~ 3.3.a.10. Other solid waste facilities approved in writing by the director.

#### 3.4. Pre-Siting Requirements for Commercial Solid Waste Facilities.

Except those recycling facilities specifically exempted by W. Va. Code §20-11-12, any person wishing to apply for a permit under ~~Article W.~~ W. Va. Code §22 -15-1 et seq., must comply with the following:

~~3.4.1.~~ 3.4.a. Any person investigating an area for the purpose of siting a commercial solid waste facility where no current solid waste facility exists, in order to determine a feasible, approximate location, and in order to obtain a permit to construct and operate a commercial solid waste facility in this state, a person must have complied with the pre-siting requirements of the W. Va. Code §22-15-13 but not limited to the following:

~~3.4.1.a.~~ 3.4.a.1. Publish a Class II legal advertisement in a qualified newspaper, as defined in W. Va. Code §59-3-1 et seq., serving the county or counties in which the proposed facility is to be located. This legal advertisement must include the nature of the proposed activity, and:

~~3.4.1.a.A.~~ 3.4.a.1.A. A description of the location or locations at which the proposed facility may be sited;

~~3.4.1.a.B.~~ 3.4.a.1.B. A statement of the anticipated size of the proposed facility, in acres; and

~~3.4.1.a.C.~~ 3.4.a.1.C. An estimate of the volume, type, and origin of solid waste to be handled at the proposed facility.

~~3.4.1.b.~~ 3.4.a.2. File a pre-siting notice with the director within five (5) days of the publication of the legal advertisement required under ~~section paragraph~~ 3.4.1.a-3.4.a.1 of this rule. The pre-siting notice must be made in writing on forms obtained from the director, which must be signed and verified by the applicant, and must include:

~~3.4.1.b.A.~~ 3.4.a.2.A. A certification of publication of the legal advertisement required under ~~section paragraph~~ 3.4.1.a 3.4.a.1 of this rule from a qualified newspaper, as defined in W. Va. Code §59-3-1 et seq. in which such advertisement was published;

~~3.4.1.b.B.~~ 3.4.a.2.B. A description of each location at which the proposed facility or facilities may be sited;

~~3.4.1.b.C.~~ 3.4.a.2.C. A United States Geological Survey (USGS) topographic map or portion thereof, and a map showing the location and anticipated property, site, and other boundaries of each site being considered for the proposed facility;



~~3.4.1.b.D.~~ 3.4.a.2.D. An estimate of the volume, type, and origin of solid waste to be handled at the proposed facility;

~~3.4.1.b.E.~~ 3.4.a.2.E. The period of time over which the investigative review of the site will be undertaken;

~~3.4.1.b.F.~~ 3.4.a.2.F. Other information required by the director; and

~~3.4.1.e.~~ 3.4.a.3. Provide a copy of the pre-siting notice to the appropriate county or regional solid waste authority, county commission and/or other entities established pursuant to W. Va. §22C- 4-1 et seq. as amended, according to the county or region in which the proposed facility is to be located, as required within five (5) days of the publication of the legal advertisement required under ~~section~~ paragraph 3.4.1.a 3.4.a.1 of this rule.

~~3.4.2.~~ 3.4.b. The director must hold a public hearing on the pre-siting notice in the area potentially affected.

~~3.4.2.a.~~ 3.4.b.1. The public hearing on the contents of the pre-siting notice must be conducted in accordance with the provisions of subsection 3.23 of this rule.

~~3.4.2.b.~~ 3.4.b.2. The director may substitute the public hearing held by the county or regional solid waste authority during the county appraisal or county siting process for the hearing contemplated by ~~section subdivision 3.4.2~~ 3.4.b of this rule.

~~3.4.3.~~ 3.4.c. Based on comments received at the public hearing or received in writing within ten (10) days following the public hearing, or upon recommendations received from the county, regional solid waste authorities within ninety (90) days after their receipt of the pre-siting notice, the director may require the person who submitted that notice to furnish additional information on the siting of the proposed facility. Such

additional information may include, but not be limited to, the following:

~~3.4.3.a.~~ 3.4.c.1. Impacts upon transportation facilities;

~~3.4.3.b.~~ 3.4.c.2. Impacts upon public water supplies;

~~3.4.3.c.~~ 3.4.c.3. Impact upon land use patterns;

~~3.4.3.d.~~ 3.4.c.4. Impacts upon agricultural, commercial and residential real estate values;

~~3.4.3.e.~~ 3.4.c.5. Impacts upon wildlife;

~~3.4.3.f.~~ 3.4.c.6. Impacts upon endangered or threatened species of animals or plants;

~~3.4.3.g.~~ 3.4.c.7. Impacts upon aesthetics;

~~3.4.3.h.~~ 3.4.c.8. Impacts upon socioeconomic conditions;

~~3.4.3.i.~~ 3.4.c.9. Impacts upon water resources; and

~~3.4.3.j.~~ 3.4.c.10. Other impacts as determined by the director.

### 3.5. Facility Permits.

#### ~~3.5.1.~~ 3.5.a. Permit Required.

A permit must be obtained from the director prior to the installation, establishment, construction, modification, operation, or closure of any solid waste facility.

#### ~~3.5.2.~~ 3.5.b. Single Permit.

Permits issued pursuant to this rule must meet

the requirements of W. Va. Code §§22-15-1 et seq. and 22-11-1 et seq., and all associated rules as applicable so that only one permit for any solid waste facility will be issued by the director. The W. Va. Code §22-11 portion of that single permit must also meet the requirements of the "Groundwater Protection Act" promulgated under W. Va. Code §22-12-1 et seq., and any rules promulgated thereunder, as amended.

~~3-5-3:~~ 3.5.c. Term of Permit.

All permits issued pursuant to W. Va. Code §22-15-1 et seq., and this rule must have a fixed term not to exceed five (5) years from the date of issuance. The director may administratively extend any permit expiration date for a period of up to one (1) year.

~~3-5-4:~~ 3.5.d. Existing Permits.

Any person who, on or after the effective date of this rule, holds a valid Division permit, or modifies or renews such permit to conduct a solid waste activity must, upon notification by the director in writing, submit a request to the director for a minor modification of that permit, in accordance with the provisions of ~~section subsection~~ 3.18 of this rule, so that the applicable provisions of this rule can be incorporated into the terms and conditions of the existing permit. The director may only require a minor modification of the facility permit if the statute "Solid Waste Management Act," this rule, or the counterpart federal regulation is modified or amended. The permit modification request must be submitted within ninety (90) days of the date of receipt of the notification of the director that they are required to comply with all requirements of W. Va. Code §22-15-1 et seq., and this rule, as applicable.

~~3-5-5:~~ 3.5.e. Application Completeness.

A complete permit application, including the background investigation disclosure statement, must consist of all applicable information as

required for final permit approval by this rule that renders the application for a permit, renewal, modification, transfer or other permitting function to be both administratively and technically complete.

3.6. Permit Application Fees.

~~3-6-1:~~ 3.6.a. Each application for a solid waste facility permit, renewal, modification, transfer or other permitting functions must be accompanied by a nonrefundable application fee in accordance with the schedule of fees in Appendix IV to this rule, as amended.

~~3-6-2:~~ 3.6.b. A fee equal to ten percent (10%) of the application fee listed in Appendix IV to this rule must accompany an application for any renewal, modification, transfer or other permitting functions refiled or that requires additional information due to substantial administrative or technical incompleteness.

3.7. Permit Application Requirements.

A permit must be obtained from the director prior to the installation, establishment, construction, modification, operation, or closure of any solid waste facility. Unless otherwise specified in this rule or on application forms prescribed by the director, all applications for a solid waste facility permit must include the following:

~~3-7-1:~~ 3.7.a. Forms and Number of Copies.

The application must be made on the forms prescribed by, and obtained from the director. Four (4) copies of the application, including all supporting documents, must be submitted to the director; a fifth copy must be submitted to the applicable county, or regional solid waste authority for the area in which the proposed facility is, or will be located.

~~3-7-2:~~ 3.7.b. Property Rights.

The application must provide a copy and a narrative description of the legal documents upon which the applicant's legal right to enter and conduct solid waste operations is based within the solid waste facility proposed permit area and whether that right is the subject of pending or current court litigation.

~~3.7.3.~~ 3.7.c. Certification.

All application documents related to engineering and design plans and specifications must be compiled, signed, and sealed by a professional engineer who is registered to practice in West Virginia.

~~3.7.4.~~ 3.7.d. Cover Letter.

The application must include a cover letter detailing the desired Division action and/or response.

~~3.7.5.~~ 3.7.e. Table of Contents.

The application must include a table of contents listing all sections, visuals and attachments of the submittal.

~~3.7.6.~~ 3.7.f. Visuals.

The application must include appropriate maps, figures, photographs, and tables to clarify information or conclusions. The visuals must be legible. All maps, plan sheets, drawings, isometrics, cross-sections, aerial photographs and other attachments must:

~~3.7.6.a.~~ 3.7.f.1. Be no smaller than eight and one-half inches by eleven inches (8-1/2" x 11") and, if larger, must be folded to eight and one-half inches by eleven inches (8-1/2" x 11");

~~3.7.6.b.~~ 3.7.f.2. Be of appropriate scale to show all required details in sufficient clarity;

~~3.7.6.c.~~ 3.7.f.3. Be numbered,

referenced in the table of contents and narrative, titled, have a legend of all symbols used, and specify drafting or origination dates;

~~3.7.6.d.~~ 3.7.f.4. Use uniform horizontal and vertical scales;

~~3.7.6.e.~~ 3.7.f.5. Contain a north arrow;

~~3.7.6.f.~~ 3.7.f.6. Use USGS datum as a basis for all elevations;

~~3.7.6.g.~~ 3.7.f.7. Contain a survey grid with a maximum dimension of two hundred (200) feet square based on monuments established in the field which is referenced to state plane coordinates;

~~3.7.6.h.~~ 3.7.f.8. Show original topography and the grid system on plan sheets showing construction, operation, or closure topography; and

~~3.7.6.i.~~ 3.7.f.9. Show survey grid location and reference major plan sheets on all cross-sections. A reduced diagram of a cross-section location plan view map must be included on the sheets with the cross-section.

~~3.7.7.~~ 3.7.g. Quality Assurance and Quality Control Plans.

The application must include quality assurance and quality control (Q.A./Q.C.) plans to be implemented to assure conformity of the solid waste facility construction, environmental monitoring, monitoring well development, and provisions for monitoring within applicable standards.

~~3.7.7.a.~~ 3.7.g.1. The Q.A./Q.C. plans must include a delineation of the quality assurance and quality control management organization, including the chain of command of the Q.A./Q.C. inspectors and contractors;

~~3.7.7.b.~~ 3.7.g.2. The Q.A./Q.C. plans must include a description of the required level of experience and training for the contractor, the contractor's crew, and Q.A./Q.C. inspectors for every major phase of construction in sufficient detail to demonstrate that the installation methods and procedures required in this rule will be properly implemented; and

~~3.7.7.c.~~ 3.7.g.3. The Q.A./Q.C. plans must include a description of the quality assurance and quality control testing procedures for every major phase of construction. At a minimum, these Q.A./Q.C. procedures must include:

~~3.7.7.c.A.~~ 3.7.g.3.A. The frequency of field inspections, field testing, and frequency of sampling for laboratory testing;

~~3.7.7.c.B.~~ 3.7.g.3.B. The sampling and field testing procedures and any associated equipment to be utilized;

~~3.7.7.c.C.~~ 3.7.g.3.C. The calibration of field testing equipment;

~~3.7.7.c.D.~~ 3.7.g.3.D. The frequency of performance audits;

~~3.7.7.c.E.~~ 3.7.g.3.E. The sampling size;

~~3.7.7.c.F.~~ 3.7.g.3.F. The soils or geotechnical laboratory to be used;

~~3.7.7.c.G.~~ 3.7.g.3.G. The laboratory procedures to be utilized;

~~3.7.7.c.H.~~ 3.7.g.3.H. The calibration of laboratory equipment;

~~3.7.7.c.I.~~ 3.7.g.3.I. The laboratory's Q.A./Q.C. procedures;

~~3.7.7.c.J.~~ 3.7.g.3.J. The limits for test failure; and

~~3.7.7.c.K.~~ 3.7.g.3.K. A description of the corrective procedures to be used upon test failure;

~~3.7.7.d.~~ 3.7.g.4. The Q.A./Q.C. plans must include a description of the quality assurance and quality control sampling and analysis procedures. At a minimum, these Q.A./Q.C. procedures must encompass the sampling procedures and analyses of groundwater, surface water, soil, leachate, and gas required under this rule.

#### ~~3.7.8.~~ 3.7.h. Technical Procedures.

All technical procedures used to investigate a solid waste facility must be the current standard procedures as specified by the American Society for Testing Materials or by the United States Geological Survey or other equivalent, appropriate methods approved by the director.

~~3.7.8.a.~~ 3.7.h.1. All technical data submitted in the application must be accompanied by the names of person(s) and/or organization(s) that collected and/or analyzed the data, the dates of the collection, dates of analyses, an analysis of the data, a description of the methodology used to collect and analyze the data, and the chain of custody of any sample taken for analyses.

#### ~~3.7.9.~~ 3.9.i. Endangered Species and Historic Sites.

The application must include a letter from the Division of Natural Resources' Section of Wildlife Resources addressing the presence of any endangered or threatened species of animals or plants in the vicinity of the proposed facility. The application must also include a letter from the West Virginia Division of Culture and History addressing the presence of any historical, scientific, or archaeological areas in the vicinity of the proposed facility.

#### ~~3.7.10.~~ 3.7.j. Bonding and Financial Assurance.

Sufficient bond or other type of financial assurance must be submitted to the Division in compliance with the provisions of ~~section subsection~~ 3.13 of this rule.

~~3.7.10.a.~~ 3.7.j.1. The permittee must maintain copies of any required closure, post-closure and corrective action cost estimates in the operating record. A copy of the estimate, or the estimate as amended, must be approved by the director prior to the placement of the estimate in the operating record.

~~3.7.11.~~ 3.7.k. Background Investigation Disclosure Statement.

The background investigation disclosure statement for a solid waste facility permit must include the name of the applicant or any officer, director, or manager thereof; shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise; or other person conducting or managing the affairs of the applicant or the proposed facility and must be submitted to the director in compliance with ~~section subsection~~ 3.14 of this rule.

~~3.7.12.~~ 3.7.l. Facility Expansion.

In an application for an expansion of an existing facility, the effectiveness of the existing design and operation must be discussed. An evaluation of relevant monitoring data and a discussion of all plan modifications and remedial actions must be included in the application. Any significant adverse impacts to the waters of the State or to any endangered or threatened species of animal or plant that could result from the expansion must also be noted and discussed.

~~3.7.13.~~ 3.7.m. Waste Reduction and Recovery Information.

The application must include a discussion of the alternatives to the facility, as well as a description of any waste reduction incentives and recycling services to be instituted or provided

with the proposed facility as contained in ~~section subdivision~~ ~~3.7.13~~ 3.7.m of this rule.

~~3.7.13.a.~~ 3.13.m.1. Waste Types, Origins, and Quantities.

The application must include a brief description of the types, origins, and quantities of household, commercial, industrial, construction/demolition, and other wastes anticipated to be accepted at the existing or proposed facility and a calculation of waste quantities by composition based on state-estimated figures or other data if readily available.

~~3.7.13.b.~~ 3.7.m.2. Description of Technologies.

The application must include a brief description of the technologies and methodologies of waste reduction, reuse, recycling, composting and energy recovery as applicable to the wastes anticipated to be accepted at the proposed facility.

~~3.7.13.c.~~ 3.7.m.3. Ongoing Program.

The application must include a brief description of any known waste reduction or recovery programs in the area to be served by the proposed facility that handle the types of waste anticipated to be accepted at the existing or proposed facility, including a description of their potential for expansion.

~~3.7.13.d.~~ 3.7.m.4. Recommendations.

The application must include a brief description of any recommendations for waste reduction and recovery in approved area-wide solid waste management plans for all counties in the area to be served by the proposed facility.

~~3.7.13.e.~~ 3.7.m.5. Current Studies.

The application must include a brief description of any waste reduction or recovery studies being conducted for wastes anticipated to

be accepted at the proposed facility.

~~3.7.13.f.~~ 3.7.m.6. Available Recovery Markets.

The application must include a description of the nearest available markets for recoverable material from the waste anticipated to be accepted at the proposed facility including:

~~3.7.13.f.A.~~ 3.7.m.6.A. Market name and address;

~~3.7.13.f.B.~~ 3.7.m.6.B. Market requirements for minimum quantities and preparation for deliverable material; and

~~3.7.13.f.C.~~ 3.7.m.6.C. Prices paid for materials, including both current prices and ranges for the past three (3) years, if available.

~~3.7.13.g.~~ 3.7.m.7. Potential Energy Markets.

The application must include a brief description of energy users within the service area capable of using at least twenty-five percent (25%) of the energy available in the waste stream anticipated at the proposed facility or for the energy available from a minimum of twenty-five (25) tons of waste per day, whichever is greater. At a minimum, consideration must be given to both electrical generation and to steam production.

~~3.7.13.h.~~ 3.7.m.8. Future Effects.

The application must include a brief description of any efforts to be implemented to either assist in the expansion of existing waste reduction and recovery programs or to develop new programs for waste reduction and recovery.

~~3.7.14.~~ 3.7.n. Geotechnical Information.

The application must include an analysis of the geologic, hydrogeologic, topographic, and

hydrologic features of the facility site that may be favorable or unfavorable for facility development in compliance with the requirements of ~~section~~ subsection 3.8 of this rule.

~~3.7.15.~~ 3.7.o. Identification and Characterization of Potential Borrow Sources.

The application must include an identification and characterization of the potential borrow sources as detailed in ~~section~~ subsection 3.12 of this rule.

~~3.7.16.~~ 3.7.p. Proposed Design and Operation.

The application must include a proposed design based on conclusions outlined in the construction design section of the application as designated in ~~section~~ subsection 3.10 of this rule. A general discussion of the proposed operating procedures must also be included.

~~3.7.17.~~ 3.7.q. Landfill Liners.

The application must include plans, drawings, cross-sections, and specifications for a liner system as designated in ~~section~~ subsection 3.11 of this rule.

~~3.7.18.~~ 3.7.r. Verification of Application.

The application must include a notarized signature of a principal officer, or ranking public official, verifying that the information contained in the application is true, complete and accurate to the best of that individual's knowledge and belief, based upon inquiry.

3.8. General Geologic and Hydrologic Submission Requirements.

~~3.8.1.~~ 3.8.a. Site Information.

The application must include the following information regarding the potential site:



~~3.8.1.a.~~ 3.8.a.1. Total acres of area permitted, or to be permitted;

~~3.8.1.b.~~ 3.8.a.2. Total acres of disposal area;

~~3.8.1.c.~~ 3.8.a.3. Planned life of facility;

~~3.8.1.d.~~ 3.8.a.4. Previous existence or present activities of mines or quarries at the site;

~~3.8.1.e.~~ 3.8.a.5. A 7.5 minute USGS topographic map, or an eight and one-half inch by eleven inch (8-1/2" x 11") copy of a portion thereof, showing:

~~3.8.1.e.A.~~ 3.8.a.5.A. The site and its boundaries;

~~3.8.1.e.B.~~ 3.8.a.5.B. The area surrounding the site for at least fifteen hundred (1,500) feet beyond the site boundaries;

~~3.8.1.e.C.~~ 3.8.a.5.C. The name of the USGS quadrangle;

~~3.8.1.e.D.~~ 3.8.a.5.D. The date of last USGS map revision;

~~3.8.1.e.E.~~ 3.8.a.5.E. The latitude and longitude of the center of the disposal area; and

~~3.8.1.e.F.~~ 3.8.a.5.F. The location of the items listed in section paragraph 3.8.1.1 3.8.a.12 of this rule, unless such items are instead shown on the large-scale map;

~~3.8.1.f.~~ 3.8.a.6. A description of the site location;

~~3.8.1.g.~~ 3.8.a.7. A description of the site terrain;

~~3.8.1.h.~~ 3.8.a.8. A description of any title, deed, or usage restrictions affecting the

proposed permit area;

~~3.8.1.i.~~ 3.8.a.9. The name of the town nearest to the site;

~~3.8.1.j.~~ 3.8.a.10. The name of the county, or counties in which the site is, or will be located;

~~3.8.1.k.~~ 3.8.a.11. A large-scale map -- with a minimum scale of one inch equal to two hundred feet (1 inch = 200 feet) and a maximum contour interval of ten (10) feet; showing the location of the items listed in section paragraph 3.8.1.1 3.8.a.12 of this rule, unless such items are instead shown on the 7.5 minute topographic map;

~~3.8.1.l.~~ 3.8.a.12. Map Inclusions.

All of the following which occur either within the site boundaries or within fifteen hundred (1,500) feet of the site boundaries or within the distances specified in sections subsections 3.1 and 3.2 of this rule must be indicated on the large-scale map or the 7.5 minute topographic map or both;

~~3.8.1.l.A.~~ 3.8.a.12.A. Water supply wells;

~~3.8.1.l.B.~~ 3.8.a.12.B. Springs;

~~3.8.1.l.C.~~ 3.8.a.12.C. Natural wetlands (e.g., swamps, bogs, marshes);

~~3.8.1.l.D.~~ 3.8.a.12.D. Streams;

~~3.8.1.l.E.~~ 3.8.a.12.E. Public water supplies;

~~3.8.1.l.F.~~ 3.8.a.12.F. Other bodies of water;

~~3.8.1.l.G.~~ 3.8.a.12.G. Underground and surface mines (for underground mines, also indicate the subsidence angle of draw, as applicable);

~~3.8.1.1.H.~~ 3.8.a.12.H. Mine pool(s) and point(s) of discharge;

~~3.8.1.1.I.~~ 3.8.a.12.I. Mine refuse spoil piles, and any impoundment capabilities;

~~3.8.1.1.J.~~ 3.8.a.12.J. Quarries or sand and gravel pits;

~~3.8.1.1.K.~~ 3.8.a.12.K. Gas and oil wells;

~~3.8.1.1.L.~~ 3.8.a.12.L. Surface and groundwater quality monitoring points;

~~3.8.1.1.M.~~ 3.8.a.12.M. Occupied or habitable dwellings;

~~3.8.1.1.N.~~ 3.8.a.12.N. Roads;

~~3.8.1.1.O.~~ 3.8.a.12.O. Power lines, pipelines and other utilities;

~~3.8.1.1.P.~~ 3.8.a.12.P. Public buildings;

~~3.8.1.1.Q.~~ 3.8.a.12.Q. Sinkholes;

~~3.8.1.1.R.~~ 3.8.a.12.R. Property boundaries;

~~3.8.1.1.S.~~ 3.8.a.12.S. Owners of record both surface and subsurface;

~~3.8.1.1.T.~~ 3.8.a.12.T. Easements or right-of-ways; and

~~3.8.1.1.U.~~ 3.8.a.12.U. One hundred (100) year floodplain boundary.

~~3.8.1.1.V.~~ 3.8.a.12.V. All areas prohibited by ~~section~~ subsection 3.1 of this rule, or for which location standards have been established by ~~section~~ subsection 3.2 of this rule.

~~3.8.2.~~ 3.8.b. Soils Information.

Backhoe test pits or drilled test borings must be employed to determine soil types, characteristics, and conditions. A minimum of four (4) test pits or borings for the first ten (10) or less acres and one (1) test pit or boring for each additional ten (10) or less acres must be excavated or drilled on a uniform grid pattern across each proposed disposal area and each proposed borrow source. Test pits or borings for all solid waste facilities must be located so as to identify all soil types distributed over the site. The applicant must provide the following:

~~3.8.2.a.~~ 3.8.b.1. A list of each soil series and phase present on the site and each borrow source and soil maps with site and borrow source boundaries as an attachment;

~~3.8.2.b.~~ 3.8.b.2. The soil maps must show the locations of all test pits or borings made to describe soils and determine their depth;

~~3.8.2.c.~~ 3.8.b.3. A description of soil horizons containing seventy-five percent (75%) or more coarse fragments (as per the Unified Soil Classification System) including:

~~3.8.2.c.A.~~ 3.8.b.3.A. Minimum thickness of soil to horizons with seventy-five percent (75%) or more coarse fragments;

~~3.8.2.c.B.~~ 3.8.b.3.B. Soil thickness determination procedures; and

~~3.8.2.c.C.~~ 3.8.b.3.C. Degree of weathering of coarse fragments.

~~3.8.2.d.~~ 3.8.b.4. Test pit or excavation descriptions including depth to all horizons, color, texture, structure, consistence, depth to and color of any mottles;

~~3.8.2.e.~~ 3.8.b.5. Results of laboratory analyses of soil samples taken from test pits or borings including analyses for grain size, pH, permeability, and Atterberg limits for predominate soil types; and



~~3.8.2.f.~~ 3.8.b.6. A description of the following general soil characteristics;

~~3.8.2.f.A.~~ 3.8.b.6.A. Drainage characteristics of soil;

~~3.8.2.f.B.~~ 3.8.b.6.B. Maximum slopes at the proposed site; and

~~3.8.2.f.C.~~ 3.8.b.6.C. Shallowest depth from surface to mottling.

~~3.8.2.g.~~ 3.8.b.7. A minimum of four (4) representative samples for the first ten (10) or less acres and one (1) additional sample for each additional ten (10) or less acres must be tested for the relationship of water content to dry density using either the Modified or Standard Proctor method. Each Proctor curve must be developed with a minimum of five (5) points.

~~3.8.2.h.~~ 3.8.b.8. A minimum of twenty percent (20%) of the samples used to develop the Proctor curves must be used to evaluate soil permeability. This evaluation must be accomplished by determining the maximum density and optimum moisture through a Proctor test (D-698) and then testing for permeability at a dry density between ninety-five percent (95%) and one hundred percent (100%) of the maximum and within four percent (4%) of optimum moisture.

~~3.8.3.~~ 3.8.c. Site Geological Information.

A minimum of four (4) test corings must be performed at any landfill site with a permitted surface area of ten (10) or less acres and one (1) additional test coring performed for each additional five (5) acres up to one hundred fifty (150) acres, not to exceed fifteen (15) holes. Any acreage over one hundred fifty (150) acres must require one (1) additional test coring per ten (10) or less acres. Such test corings must be distributed over the entire site area to give an accurate description of subsurface conditions for the area of the site which is intended for use as a

landfill. The depth at which coreholes must terminate must be determined by the following: the first coring must be placed in the lowest point of the proposed disturbed area and cored to the uppermost significant aquifer that is to be monitored or corings must penetrate to a minimum depth of one hundred (100) feet in the absence of the aquifer. Upon the completion of drilling, drilling logs for all completed coreholes must be submitted to the director.

~~3.8.3.a.~~ 3.8.c.1. The site geological analysis must provide the following information:

~~3.8.3.a.A.~~ 3.8.c.1.A. Sediments.

~~3.8.3.a.A.(a)~~ 3.8.c.1.A.1. A notation of the presence of any sedimentary deposits under the proposed site including, but not limited to, colluvial, alluvial, or lacustrine;

~~3.8.3.a.A.(b)~~ 3.8.c.1.A.2 A description of the type and texture of unconsolidated materials;

~~3.8.3.a.A.(c)~~ 3.8.c.1.A.3 The thickness of unconsolidated materials including the maximum, minimum, and how the thickness was determined procedurally; and

~~3.8.3.a.A.(d)~~ 3.8.c.1.A.4 A description of the different formations of unconsolidated materials and the effects of these sediments on potential discharges from the landfill;

~~3.8.3.a.B.~~ 3.8.c.1.B. Bedrock.

~~3.8.3.a.B.(a)~~ 3.8.c.1.B.1. The formations and names;

~~3.8.3.a.B.(b)~~ 3.8.c.1.B.2. The lithologies including major lithologic names in the area (e.g., Morgantown, Sandstone, Ames Limestone), must be plotted on the large-scale map;

~~3.8.3.a.B.(e)~~ 3.8.c.1.B.3 An indication of all areas where bedrock outcrops within the site and also within fifteen hundred (1,500) feet of the site boundaries on the large-scale map;

~~3.8.3.a.B.(d)~~ 3.8.c.1.B.4 A characterization of the degree of bedrock weathering;

~~3.8.3.a.B.(e)~~ 3.8.c.1.B.5. The shallowest depth from surface to bedrock; and

~~3.8.3.a.B.(f)~~ 3.8.c.1.B.6. For carbonate rock, show any undrained depressions or sinkholes existent on-site or within fifteen hundred (1,500) feet of the site shown on the large-scale map or the 7.5 minute topographic map or both;

~~3.8.3.a.C.~~ 3.8.c.1.C. Structure.

~~3.8.3.a.C.(a)~~ 3.8.c.1.C.1. An indication of all of the following types of fracture zones on-site and within fifteen hundred (1,500) feet of the site boundaries on the large-scale map or the 7.5 minute topographic map or both:

~~3.8.3.a.C.(a)(A)~~  
3.8.c.1.C.1.(a) Traces;

~~3.8.3.a.C.(a)(B)~~  
3.8.c.1.C.1.(b) Lineaments;

~~3.8.3.a.C.(a)(C)~~  
3.8.c.1.C.1.(c) Joints; and

~~3.8.3.a.C.(a)(D)~~  
3.8.c.1.C.1.(d) Faults.

~~3.8.3.a.C.(b)~~ 3.8.c.1.C.2. A description of the influence that these fracture zones have on the movement of infiltrated water and groundwater;

~~3.8.3.a.C.(e)~~ 3.8.c.1.C.3. A description of the regional bedrock structures in

the area of the site;

~~3.8.3.a.C.(d)~~ 3.8.c.1.C.4. A detailed description of the local bedrock structure. Applicants must construct a structural geologic map with a scale of one inch equal to two hundred feet (1 inch = 200 feet) using the structural contour intervals. For bedrock dip at angles of zero to five degrees, contour intervals must be five (5) feet; for angles of five to thirty degrees, contour intervals must be ten (10) feet; and for angles of greater than thirty (30) degrees, contour intervals must be twenty-five (25) feet. The use of intermediate contours in areas of low structural relief for greater detail is required;

~~3.8.3.a.C.(e)~~ 3.8.c.1.C.5. A description of folding as it applies to the site including strike and plunge of fold axis and location of the site in relation to the local structure;

~~3.8.3.a.C.(f)~~ 3.8.c.1.C.6. The strike and dip of bedding planes;

~~3.8.3.a.C.(g)~~ 3.8.c.1.C.7. A description of the joints and fractures including strike, dip, and open joints and a description of the spacing of the joints;

~~3.8.3.a.C.(h)~~ 3.8.c.1.C.8. A description of all faults located on or within fifteen hundred (1,500) feet of the site boundaries including the strike and dip of faults and an indication of all faults in the area of the site on a map; and

~~3.8.3.a.C.(i)~~ 3.8.c.1.C.9. A minimum of two (2) geologic profiles using bedrock outcrops and corehole information including the vertical exaggeration to adequately illustrate the geology of the site;

~~3.8.3.a.D.~~ 3.8.c.1.D. Mining.

~~3.8.3.a.D.(a)~~ 3.8.c.1.D.1. A notation of the presence of any abandoned,

reclaimed, active, and inactive surface mines on the site;

~~3.8.3.a.D.(b)~~ 3.8.c.1.D.2. A list of any extractable coal seams beneath the site;

~~3.8.3.a.D.(c)~~ 3.8.c.1.D.3. Any abandoned, reclaimed, active or inactive underground mines located on-site or within fifteen hundred (1,500) feet of the site boundaries including minimum depth to mined area, aerial extent of mined area as shown, and type of minerals mined (If coal, give the names of seams.); and

~~3.8.3.a.D.(d)~~ 3.8.c.1.D.4. Any mine maps and related information for mined areas under the site or within fifteen hundred (1,500) feet of the site boundaries.

#### ~~3.8.4.~~ 3.8.d. Hydrologic Information.

The permittee must install a groundwater monitoring system that consists of a sufficient number of wells (a minimum of four {4}) monitoring wells must be installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer or the uppermost aquifer at all landfill sites. Monitoring wells -- one (1) upgradient and three (3) downgradient -- must monitor the same aquifer. If previously drilled geologic corings are to be used as monitoring wells and the uppermost significant aquifer has been drilled through, then those holes proposed to monitor groundwater must be plugged from the bottom of the hole to the uppermost significant aquifer with a sodium bentonite grout, then properly screened and cased.

~~3.8.4.a.~~ 3.8.d.1. Groundwater monitoring wells must meet the following specifications:

~~3.8.4.a.A.~~ 3.8.d.1.A. All monitoring well casings and screens must be constructed of a minimum of two (2) inch (inner diameter) Schedule 40 polyvinyl chloride (PVC)

plastic pipe, or other casing satisfactory to the director. Lengths of pipe must be joined using threaded couplings. Solvent cement must not be used for PVC couplings. Borehole diameter must be a minimum of six (6) inches larger than the PVC casing. If approved by the director, the borehole diameter may be smaller if proven methods are employed to facilitate the emplacement of the filter pack and annular sealant.

~~3.8.4.a.B.~~ 3.8.d.1.B. The screened interval for monitoring wells must consist of a minimum of ten (10) to a maximum of twenty (20) feet of properly sized, preconstructed, commercially available well screen of the same material and diameter as the casing, or screen as approved by the director. The screen is to have a slot size to enable retainment of eighty-five to one hundred percent (85%-100%) of the filter pack material. The bottom of the screen must be capped. Should the uppermost aquifer thickness exceed twenty (20) feet or be comprised of several hydraulically connected formations, then a cluster of wells or some other type of multiple zone monitoring system may be required at the discretion of the director.

~~3.8.4.a.C.~~ 3.8.d.1.C. All wells must be sand or gravel-packed (depending on screen size) from the base of the well to a level a minimum of two (2) feet and a maximum of five (5) feet above the top of the screen. An impervious two (2) foot or greater bentonite seal must be installed on top of the gravel packing.

~~3.8.4.a.D.~~ 3.8.d.1.D. All wells must be continuously grouted from the top of the impervious seal to above the groundwater table. Wells must not be grouted with cement below the potentiometric surface of the uppermost significant aquifer.

~~3.8.4.a.E.~~ 3.8.d.1.E. From below the frost line, the cap must be composed of concrete (using expanding cement) blending into a four (4) inch thick apron extending three (3) feet

or more from the outer edge of the borehole.

~~3.8.4.a.F.~~ 3.8.d.1.F. Upon completion, all wells must be fully developed and pumped to determine the yield of the well.

~~3.8.4.a.G.~~ 3.8.d.1.G. The elevation of the top of the well casing must be two (2) to three (3) feet above the elevation of the ground surface.

~~3.8.4.a.H.~~ 3.8.d.1.H. All wells must be properly tagged with permit number, top of casing elevation, well number, and flagged or otherwise made visible so they can be readily located in the field, and avoided by onsite heavy equipment. A survey mark must be placed on the top of the casing at the point utilized for determining elevation.

~~3.8.4.a.I.~~ 3.8.d.1.I. All wells must be provided with a means of protection from tampering, vandalism, or damage. At a minimum, protection must be provided by a lockable outer well cap.

~~3.8.4.a.J.~~ 3.8.d.1.J. In addition to the requirements of ~~section subdivision 3.8.4~~ 3.8.d of this rule, the monitoring system must be installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer that:

~~3.8.4.a.J.(a)~~ 3.8.d.1.J.1. Represent the quality of background groundwater that has not been affected by leakage from a SWLF.

~~3.8.4.a.J.(b)~~ 3.8.d.1.J.2. A determination of the background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

~~3.8.4.a.J.(b)(A)~~ 3.8.d.1.J.2.(a) Hydrogeologic conditions do not allow the permittee to determine what wells are

hydraulically upgradient; or

~~3.8.4.a.J.(b)(B)~~ 3.8.d.1.J.2.(b) Sampling of other wells will provide an indication of the background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

~~3.8.4.a.J.(b)(C)~~ 3.8.d.1.J.2.(c) Represent a quality of groundwater passing the relevant point of compliance specified by the director under ~~section~~ subparagraph 4.5.4.a.G 4.5.d.1.G of this rule.

~~3.8.4.a.J.(b)(D)~~ 3.8.d.1.J.2.(d) The downgradient monitoring system must be installed at the relevant point of compliance specified by the director under ~~section~~ subparagraph 4.5.4.a.G 4.5.d.1.G of this rule that ensures detection of groundwater contamination in the uppermost aquifer.

~~3.8.4.a.J.(b)(E)~~ 3.8.d.1.J.2.(e) When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing SWLFs, the downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the relevant point of compliance specified by the director that ensure detection of groundwater contamination in the uppermost aquifer.

~~3.8.4.a.K.~~ 3.8.d.1.K. The permittee may request the director to approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each SWLF when the facility has several SWLFs, provided the multi-unit groundwater system meets the requirements of ~~section subdivision 3.8.4~~ 3.8.d of this rule and will be as protective of human health and the environment as individual monitoring systems for each SWLF, based on the permittees' compliance with the following factors:

~~3.8.4.a.K.(a)~~ 3.8.d.1.K.1.

Number, spacing, and orientation of the SWLFs;

~~3.8.4.a.K.(b)~~ 3.8.d.1.K.2.

Hydrogeologic setting;

~~3.8.4.a.K.(e)~~ 3.8.d.1.K.3. Site

history;

~~3.8.4.a.K.(d)~~ 3.8.d.1.K.4.

Engineering design of the SWLFs, and

~~3.8.4.a.K.(e)~~ 3.8.d.1.K.5.

Type of waste accepted at the SWLFs.

~~3.8.4.a.L.~~ 3.8.d.1.L. Monitoring Well Casing Requirements. Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

~~3.8.4.a.L.(a)~~ 3.8.d.1.L.1. The permittee must notify the director that the design, installation, development, and decommission of any monitoring wells, peizometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and

~~3.8.4.a.L.(b)~~ 3.8.d.1.L.2. The monitoring wells, peizometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

~~3.8.4.a.M.~~ 3.8.d.1.M. The number, spacing, and depths of monitoring systems must be:

~~3.8.4.a.M.(a)~~ 3.8.d.1.M.1.

Determined based upon site-specific technical

information that must include through characterization of:

~~3.8.4.a.M.(a)(A)~~

3.8.d.1.M.1.(a) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

~~3.8.4.a.M.(a)(B)~~

3.8.d.1.M.1.(b) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

~~3.8.4.a.M.(b)~~ 3.8.d.1.M.2.

Certified by a qualified groundwater scientist and approved in writing by the director.

~~3.8.4.a.M.(b)(A)~~

3.8.d.1.M.2.(a) Within fourteen (14) days of this certification, the permittee must notify the director that the certification has been placed in the operating record.

~~3.8.4.b.~~ 3.8.d.2. Well Drilling.

The method used to drill the groundwater monitoring wells must be described in the application. The latitude and longitude of each well to within plus or minus one second and the USGS datum elevation of the top of each well must be included in the application.

~~3.8.4.c.~~ 3.8.d.3. Water Table.

The maximum and minimum depth to the zone of saturation must be included in the application, along with the following:

~~3.8.4.c.A.~~ 3.8.d.3.A. Seasonal

water table fluctuations at the above locations and seeps and springs affected by seasonal changes

must be described in the application and the source of information must be referenced;

~~3.8.4.e.B.~~ 3.8.d.3.B. Perched or special water table conditions must be described in the application;

~~3.8.4.e.C.~~ 3.8.d.3.C. The minimum depth to a perched water table must be provided in the application.

~~3.8.4.e.D.~~ 3.8.d.3.D. The occurrence of groundwater drainage to underground mines must be determined and, if found, mine discharges must be identified on the large-scale map or the 7.5 minute topographic map or both, as required under ~~section~~ paragraph 3.8.1.4 3.8.a.12 of this rule.

~~3.8.4.d.~~ 3.8.d.4. Groundwater Movement.

~~3.8.4.d.A.~~ 3.8.d.4.A. A large-scale map (1 inch = 200 feet) showing all groundwater flow directions must be constructed and included in the application. The water table/potentiometric surface must be contoured on this map using an appropriate contour interval.

~~3.8.4.d.B.~~ 3.8.d.4.B. The approximate rate of groundwater flow and the method used to determine that rate of flow must be provided in the application.

~~3.8.4.d.C.~~ 3.8.d.4.C. The method used to determine groundwater flow directions must be included in the application.

~~3.8.4.d.D.~~ 3.8.d.4.D. The location of all groundwater discharge points related to the site must be shown on the large-scale map required under ~~section~~ subparagraph 3.8.4.d.A 3.8.d.4.A of this rule.

~~3.8.4.d.E.~~ 3.8.d.4.E. If the site is in a groundwater discharge or recharge zone, this fact must be noted in the application.

~~3.8.4.d.F.~~ 3.8.d.4.F. The rate of groundwater flow at the site and its effects on the operation of the proposed facility must be discussed in the application.

~~3.8.4.e.~~ 3.8.d.5. Groundwater Quality Analyses.

The method of sampling; date and results of the analyses of the water sampled from each groundwater monitoring well at the site must be provided in the application. All sampling procedures must be included in the application and approved by the director. Analyses for the constituents listed in Appendix I; the facility permit; or an order by the director and any other parameter(s) specified by the director in writing must be conducted.

~~3.8.4.f.~~ 3.8.d.6. Surface Water.

~~3.8.4.f.A.~~ 3.8.d.6.A. The name of the nearest stream to the site and its 7Q10 low flow must be included in the application.

**Note:** "7Q10" means the seven (7) consecutive day drought flow with a ten (10) year return frequency, as defined in section 2 of this rule.

~~3.8.4.f.B.~~ 3.8.d.6.B. The surface drainage area of the tributary on which the site is located must be plotted on a map and included in the application.

~~3.8.4.f.C.~~ 3.8.d.6.C. The estimated peak surface water drainage flow of the tributary on which the site is located for a 25-year, 24-hour storm must be included in the application.

~~3.8.4.f.D.~~ 3.8.d.6.D. The maximum and minimum of surface slopes of the tributary on which the site is located must be included in the application.

~~3.8.4.f.E.~~ 3.8.d.6.E. The results of an analysis of water from one (1) grab sample



from the nearest stream to the site must be included in the application. This analysis must be performed for the same parameters referenced in ~~section paragraph 3.8.4.e~~ 3.8.d.3 of this rule with the addition of total suspended solids.

~~3.8.5.~~ 3.8.e. Water Budget.

A water budget must be prepared for the periods of time during active operations, when the maximum amount of area has been filled but not capped, and following facility closure at any landfill site. At a minimum, the following factors must be considered in the preparation of the water budget:

~~3.8.5.a.~~ 3.8.e.1. Average monthly temperature;

~~3.8.5.b.~~ 3.8.e.2. Average monthly precipitation;

~~3.8.5.c.~~ 3.8.e.3. Evaporation;

~~3.8.5.d.~~ 3.8.e.4. Evapotranspiration;

~~3.8.5.e.~~ 3.8.e.5. Surface slope and topsoil texture;

~~3.8.5.f.~~ 3.8.e.6. Soil moisture holding capacity and root zone depth;

~~3.8.5.g.~~ 3.8.e.7. Runoff coefficients;

~~3.8.5.h.~~ 3.8.e.8. Moisture contribution from the waste; and

~~3.8.5.i.~~ 3.8.e.9. Any groundwater contribution.

~~3.8.6.~~ 3.8.f. Liners and Leachate Collection System Efficiency.

The collection efficiency of the leachate collection system at the landfill must be calculated using an approved analytical or numerical method. The factors to be considered

in the calculation of collection efficiency must include:

~~3.8.6.a.~~ 3.8.f.1. The saturated hydraulic conductivity of the liner;

~~3.8.6.b.~~ 3.8.f.2. Liner thickness;

~~3.8.6.c.~~ 3.8.f.3. The saturated hydraulic conductivity of the drainage blanket;

~~3.8.6.d.~~ 3.8.f.4. Drainage blanket porosity;

~~3.8.6.e.~~ 3.8.f.5. The base slope of the liner;

~~3.8.6.f.~~ 3.8.f.6. The maximum flow distance across the liner;

~~3.8.6.g.~~ 3.8.f.7. Annual infiltration; and

~~3.8.6.h.~~ 3.8.f.8. Any groundwater inflow.

~~3.8.7.~~ 3.8.g. Leachate Generation.

Information gained from the collection efficiency calculations must be used to predict the daily volume of leachate collected from the landfill.

~~3.8.8.~~ 3.8.h. Waste and Leachate Characterization.

~~3.8.8.a.~~ 3.8.h.1. Industrial Wastes.

Unless otherwise approved, the physical and chemical characteristics of all wastes and leachates must be analyzed and described. When more than one waste is generated, testing shall be performed on each waste stream. All leaching tests must be done in accordance with published test procedures. Physical tests must be done in accordance with ASTM standards or published test procedures. All testing procedures must be

documented. The proposed testing program, including the leaching test method, the leaching media, the parameters to be analyzed for, and the detection limits for each parameter specified, must be discussed with the director prior to initiation of the work. Actual field leachate data may be substituted for chemical characterization data of the waste at facilities for the disposal of industrial wastes, but only if approved in writing by the director.

~~3-8-8-b:~~ 3.8.h.2. Municipal Wastes.

Actual field leachate data from existing facilities of similar size, design, and waste type or an estimate of the anticipated leachate quality available from other sources must be included for all facilities for the disposal of municipal solid waste.

~~3-8-9:~~ 3.8.i. Liquid and Non-Liquid Waste Storage.

All solid waste storage tanks, containers, liquid waste storage tanks and surface impoundments located at solid waste facilities are subject to regulation under ~~section~~ subdivision 3-8-9 3.8.i of this rule.

~~3-8-9-a:~~ 3.8.i.1. An application for a permit to construct and operate a solid waste facility which includes a waste storage area must contain the following:

~~3-8-9-a-A:~~ 3.8.i.1.A. A description of the non-liquid or liquid waste to be stored;

~~3-8-9-a-B:~~ 3.8.i.1.B. The estimated volume of the non-liquid or liquid waste generated and a proposed recordkeeping system to record actual quantities stored;

~~3-8-9-a-C:~~ 3.8.i.1.C. A schedule of stored waste removal;

~~3-8-9-a-D:~~ 3.8.i.1.D. A

description of the final treatment and disposal of the stored waste; and

~~3-8-9-a-E:~~ 3.8.i.1.E. A description of the storage facility design.

3.9. Existing Land Use and Environmental Assessment.

~~3-9-1:~~ 3.9.a. Land Use Information.

The application must discuss the present and former land uses at the facility and the surrounding area. A thorough discussion of land uses which may have an impact upon the suitability of the property for waste disposal or affected groundwater quality must be included in the application. The application must address all areas that may affect or be affected by the proposed facility; at a minimum, this will be the area within one (1) mile of the permit area for Class A solid waste facilities and within one-half (½) mile of the permit area for all other facilities. The presentation of land use information in the application must be supplemented with land use maps and, at a minimum, must specifically address the following:

~~3-9-1-a:~~ 3.9.a.1. Adjacent Landowners.

The identity and location of the adjacent landowners must be discussed in narrative form. This information may be presented on a plat map but must reflect current ownership conditions and any changes must be so noted;

~~3-9-1-b:~~ 3.9.a.2. Land Use Zoning.

The application must provide a review of land use zoning in the area and give particular attention to areas where zoning variances will be required, where agricultural impact statements may be required, or where floodplain, river corridors, or natural wetlands are designated.

~~3-9-1-c:~~ 3.9.a.3. Documentation of



### Present Land Uses.

The application must include a description of the present land use in the area. Particular emphasis must be placed on the discussion of known recreational, historical, archaeological, or environmentally unique areas. The application must include a letter from the Division's Section of Wildlife Resources addressing the presence of any endangered or threatened species of animal or plant in the vicinity of the proposed facility. The application must include a letter from the West Virginia Division of Culture and History addressing the presence of any historical, scientific, or archaeological areas in the vicinity of the proposed facility. The need for an archaeological survey of the proposed limits of waste fill prior to development must also be addressed in the application.

### ~~3.9.1.d.~~ 3.9.a.4. Transportation and Access.

Present and proposed transportation routes and access roads, including any weight restrictions, must be delineated in the application.

### ~~3.9.2.~~ 3.9.b. Environmental Review.

The application must include an environmental assessment section which addresses the following items:

#### ~~3.9.2.a.~~ 3.9.b.1. Project Summary.

The application must include a brief summary of the project, with particular attention given to the following:

~~3.9.2.a.A.~~ 3.9.b.1.A. The purpose and need for the proposed facility including the history and background of the project;

~~3.9.2.a.B.~~ 3.9.b.1.B. A listing of the statutory authority and other relevant local, state, and federal permits or approvals required for the proposed facility as well as a discussion of

the need for exemptions, zoning changes, and any other special permits; and

~~3.9.2.a.C.~~ 3.9.b.1.C. The estimated cost and funding source for the facility.

#### ~~3.9.2.b.~~ 3.9.b.2. Proposed Physical Changes.

The application must include a brief description of the proposed physical changes that will result from the project, with particular attention given to the following:

~~3.9.2.b.A.~~ 3.9.b.2.A. The changes in terrestrial resources including the quantity of material to be excavated and the lateral extent of soil removal. This discussion must also cover the quantity and source of materials to be imported for construction of the liner, final cover system, drainage blanket and perimeter berms. Any other significant terrestrial modifications such as soil placement necessary to reach the proposed sub-base grades, construction of access roads, surface water drainage features, and sedimentation controls must also be outlined;

~~3.9.2.b.B.~~ 3.9.b.2.B. The changes in aquatic resources including the potential impacts to streams, existing wetlands, lakes, and drainage basin. This discussion must include discharge rates and volumes for groundwater control structures, leachate collection systems, and surface water runoff under existing conditions as well as that anticipated during active operation and following closure of the facility;

~~3.9.2.b.C.~~ 3.9.b.2.C. Buildings, treatment units, roads, and other structures to be constructed in conjunction with the facility. This discussion must include the size of the facilities and the number of miles of road to be constructed;

~~3.9.2.b.D.~~ 3.9.b.2.D. Emissions and discharges such as dust, diesel exhaust, odors, gases, leachate, surface water runoff, and collected groundwater associated with facility

preparation, construction, operation, closure, and following closure of the facility;

~~3.9.2.b.E.~~ 3.9.b.2.E. Other changes anticipated with facility development; and

~~3.9.2.b.F.~~ 3.9.b.2.F. Maps, plans, and other descriptive material to clarify the discussion such as a county map showing the general area of the project, a USGS topographic map, a plat map, zoning map, county natural wetlands map, and a facility development plan.

~~3.9.2.e.~~ 3.9.b.3. Existing Environment.

The application must include a brief description of the existing environment that may be affected by the project, with particular attention given to the following:

~~3.9.2.e.A.~~ 3.9.b.3.A. The physical environment including the regional and local topography, geology, surface water drainage features, hydrogeologic conditions, air, natural wetlands, and earth borrow sources as well as an evaluation of the groundwater quality data and overall performance of any existing solid waste facility;

~~3.9.2.e.B.~~ 3.9.b.3.B. The dominant aquatic and terrestrial plant and animal species and habitats found in the area including any threatened or endangered species and the amount, type, and hydraulic value of natural wetlands;

~~3.9.2.e.C.~~ 3.9.b.3.C. Land use information including dominant features and zoning in the area;

~~3.9.2.e.D.~~ 3.9.b.3.D. Social and economic conditions including any ethnic or cultural groups;

~~3.9.2.e.E.~~ 3.9.b.3.E. Other special

resources such as archaeological, historical, state natural areas, and prime agricultural lands; and

~~3.9.2.e.F.~~ 3.9.b.3.F. Public and private drinking water supplies.

~~3.9.2.d.~~ 3.9.b.4. Environmental Consequences.

The application must include a brief discussion of the probable adverse and beneficial impacts of the project, including primary, indirect, and secondary impacts, with particular attention given to the following:

~~3.9.2.d.A.~~ 3.9.b.4.A. The physical impacts which would be associated with facility design, construction, and operation, including visual impacts if applicable;

~~3.9.2.d.B.~~ 3.9.b.4.B. The biological impacts including destruction and creation of habitat, alteration of the physical environment and any impacts to endangered or threatened species;

~~3.9.2.d.C.~~ 3.9.b.4.C. The impacts on land use;

~~3.9.2.d.D.~~ 3.9.b.4.D. The social and economic impacts to local residents, cultural groups, and the communities and industries served by the facility;

~~3.9.2.d.E.~~ 3.9.b.4.E. Other special resources such as archaeological, historical, state natural areas, and prime agricultural lands; and

~~3.9.2.d.F.~~ 3.9.b.4.F. Probable adverse impacts that cannot be avoided including groundwater and surface water impacts, modifications of topography and any borrow source limitations on development around the facility, any loss of agricultural or forest land, displacement of wildlife, and adverse aesthetic impacts for people in and around the facility.

### 3.10. Proposed Landfill Design.

#### ~~3.10.1.~~ 3.10.a. Report Preparation.

The application must include a report describing the proposed landfill design. At a minimum, this report must include the following:

~~3.10.1.a.~~ 3.10.a.1. Preliminary materials balance calculations, including sources for berms, liner, final cover system, drainage blanket, topsoil, daily and intermediate cover, and any other fill needed to construct the facility;

~~3.10.1.b.~~ 3.10.a.2. The proposed methods for leachate and gas control including collection, containment, and treatment. The capability of the wastewater treatment plants to accept leachate must be discussed and an identification made of the wastewater treatment plants the applicant is negotiating with to accept the leachate, if the plant is not directly controlled by the applicant;

~~3.10.1.c.~~ 3.10.a.3. The proposed operating procedures including the method of facility development, filling sequence, access control for each phase, surface water control, waste screening, covering frequency, as applicable, exclusion of hazardous wastes and other special design features;

~~3.10.1.d.~~ 3.10.a.4. A description of the proposed groundwater, leachate, surface water, gas, air, unsaturated zone, and other monitoring programs to be implemented to meet the requirements of ~~section~~ subsection 4.11 of this rule;

~~3.10.1.e.~~ 3.10.a.5. The proposed closure plan and final use as specified in ~~section~~ subsection 6.1 of this rule;

~~3.10.1.f.~~ 3.10.a.6. The proposed method of demonstrating financial responsibility for closure, post-closure care and corrective action requirements including preliminary

itemized cost estimates for land acquisition, facility preparation, construction of each major phase, daily operation, closure, post-closure care and corrective action. An estimated cost per ton for disposal must also be included;

~~3.10.1.g.~~ 3.10.a.7. Proposed design for access roads;

~~3.10.1.h.~~ 3.10.a.8. Proposed design for drainage and sediment control; and

~~3.10.1.i.~~ 3.10.a.9. Proposed revegetation plan including seed mixture, seed bed preparation, fertilizers, mulching, and maintenance schedule.

#### ~~3.10.2.~~ 3.9.b. Preliminary Engineering Plans.

The preliminary engineering design must be presented on twenty-four inch by thirty-six inch (24" x 36") plan sheets (unless an alternative size is approved by the director in writing) as follows:

~~3.10.2.a.~~ 3.10.b.1. Proposed access, lateral extent of filling, phases of facility development, sub-base and base grades, slopes and the leachate collection system. The existing conditions map must be used as a base map for this plan sheet;

~~3.10.2.b.~~ 3.10.b.2. A plan sheet showing present topography, proposed base and sub-base grades, final grades, and liner and final cover system configuration displayed on all geologic cross-sections intersecting the landfill;

~~3.10.2.c.~~ 3.10.b.3. A monitoring plan sheet showing the proposed groundwater, leachate, surface water, gas, air unsaturated zone, and any other monitoring programs;

~~3.10.2.d.~~ 3.10.b.4. A drainage plan sheet showing:

~~3.10.2.d.A.~~ 3.10.b.4.A. The

directional flow of water on and away from the land to be affected;

~~3.10.2.d.B.~~ 3.10.b.4.B. The location of all erosion and sedimentation control structures;

~~3.10.2.d.C.~~ 3.10.b.4.C. The component drainage area together with a table showing total acreage and disturbed acreage within each component; and

~~3.10.2.d.D.~~ 3.10.b.4.D. A sediment structure table showing type of sediment control structure, total contributing drainage area (acres), disturbed acreage controlled by total disturbance in the drainage area (acres), and storage capacity (acre-feet);

~~3.10.2.e.~~ 3.10.b.5. A detailed plan sheet showing proposed closure sequence and final grades;

~~3.10.2.f.~~ 3.10.b.6. A plan sheet showing the details of proposed design features for the major engineering structures at the facility; and

~~3.10.2.g.~~ 3.10.b.7. A plan sheet for any blasting that must be conducted at the facility. All blasting operations must comply with the following:

~~3.10.2.g.A.~~ 3.10.b.7.A. The blasting must be done during clear weather and during times when there is minimal traffic;

~~3.10.2.g.B.~~ 3.10.b.7.B. The blasting contractor must follow current blasting laws, regulations, rules of the state, federal, and local authorities and all appropriate regulatory agencies must be notified.

~~3.10.2.g.C.~~ 3.10.b.7.C. Adjacent residents and property owners and the proper local authorities must be properly informed about and notified of the upcoming blast operations;

~~3.10.2.g.D.~~ 3.10.b.7.D. The blasting contractor must initiate or employ a smooth blasting technique by using explosives with low charge concentration. Drilling patterns must be closely spaced with an appropriate blast hole diameter in a square or staggered drilling pattern. Blast hole design must depend on current field conditions;

~~3.10.2.g.E.~~ 3.10.b.7.E. To reduce ground vibration and excessive air blast, the contractor must employ a proper delay timing; use appropriate decking of charges and explosive powder factors applicable to the rock types being blasted;

~~3.10.2.g.F.~~ 3.10.b.7.F. The contractor must not blast below maximum approved elevations. The under-drilled few feet of the blast holes must not be loaded with explosives; and

~~3.10.2.g.G.~~ 3.10.b.7.G. Blasting must not be conducted on Sunday.

~~3.10.3.~~ 3.10.c. Sequencing of Solid Waste Disposal.

~~3.10.3.a.~~ 3.10.c.1. Solid Waste Placement Schedule.

The sequence of solid waste disposal must be specified in a schedule of solid waste placement which must be approved by the director. The solid waste placement schedule must correspond to a horizontal control grid system, with grid elements having maximum dimensions of two hundred (200) feet square. The horizontal control grid system must be referenced to a permanent physical marker or object on the site, with vertical control referenced to an elevation established for the marker. The solid waste placement schedule must specify the order in which grid elements (maximum two hundred (200) square feet in size) will be used for solid waste disposal for each lift of every solid waste fill area.

~~3.10.3.b.~~ 3.10.c.2. Solid Waste Disposal Coordination.

The schedule of solid waste placement must be coordinated with the construction of on-site access roads, surface water drainage systems, leachate collection systems and other facility construction in solid waste fill areas.

3.11. Landfill Liners.

~~3.11.1.~~ 3.11.a. Performance Standards.

The application must contain plans, drawings, cross-sections, and specifications for a liner system to demonstrate compliance with performance standards and other requirements of this rule, including, but not limited to ~~section~~ subdivision 4.5.4 4.5.d of this rule, and including the following:

~~3.11.1.a.~~ 3.11.a.1. The design of the liner system;

~~3.11.1.b.~~ 3.11.a.2. The thickness and characteristics of the subbase;

~~3.11.1.c.~~ 3.11.a.3. The thickness and characteristics of the leachate detection zone;

~~3.11.1.d.~~ 3.11.a.4. The design for the leachate monitoring system in the leachate detection zone;

~~3.11.1.e.~~ 3.11.a.5. The nature and thickness of the liner material;

~~3.11.1.f.~~ 3.11.a.6. The thickness and characteristics of the leachate collection zone;

~~3.11.1.g.~~ 3.11.a.7. The design for the leachate collection system in the collection zone;

~~3.11.1.h.~~ 3.11.a.8. The thickness and characteristics of the protective cover; and

~~3.11.1.i.~~ 3.11.a.9. A plan for

installing the liner system.

~~3.11.2.~~ 3.11.b. Q.A./Q.C. Plan.

The application must include a quality assurance and quality control (Q.A./Q.C.) plan for the construction and installation of the liner system. At a minimum, the Q.A./Q.C. plan must include:

~~3.11.2.a.~~ 3.11.b.1. A description of the testing procedures and construction methods proposed to be implemented during construction of the liner system;

~~3.11.2.b.~~ 3.11.b.2. A description of the manner in which the protective cover and liner system will be maintained and protected in unfilled portions of the disposal area prior to and during placement of the initial lift of solid waste; and

~~3.11.2.c.~~ 3.11.b.3. A description of the manner in which the protective cover and liner system will be protected from weather prior to and during placement of the initial lift of solid waste.

~~3.11.3.~~ 3.11.c. Leachate Considerations.

The application must demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate, based on the most recent edition of EPA Method 9090, Compatibility Test for Wastes and Membrane Liners, or other documented data.

3.12. Borrow Sources for Landfills.

~~3.12.1.~~ 3.12.a. General.

The application must contain a description of each proposed borrow source for liner and capping purposes including the volume of acceptable material, total acreage, ownership,

location, present land use, transportation routes and any access restrictions, travel distance from the proposed waste disposal facility, surface water drainage patterns, and significant hydrologic features such as surface waters, springs, drainage divides, and natural wetlands.

~~3-12-2:~~ 3.12.b. Field and Laboratory Investigations.

At a minimum, preliminary field and laboratory investigations to define the physical characteristics of the proposed borrow material must include the information specified in ~~section subdivision 3-8-2~~ 3.8.b of this rule unless an alternative geotechnical investigation program is approved by the director in writing. Applicants may submit an alternative program in cases where previous information exists regarding the proposed source.

~~3-12-3:~~ 3.12.c. Data Presentation.

The following information must be submitted as part of the application:

~~3-12-3-a:~~ 3.12.c.1. The calculated volume of acceptable material based on the information obtained from the test pits or borings;

~~3-12-3-b:~~ 3.12.c.2. Property boundaries and test pit/boring locations shown on a map based upon a USGS topographic map, or other equivalent map, with a scale of one inch equal to five hundred feet (1 inch = 500 feet). The mapped area must extend a minimum of five hundred (500) feet beyond the proposed borrow source;

~~3-12-3-c:~~ 3.12.c.3. An isopach map showing the thickness of acceptable material;

~~3-12-3-d:~~ 3.12.c.4. A description of the methods to be used for separating the acceptable materials from any unacceptable materials;

~~3-12-3-e:~~ 3.12.c.5. A proposal for maintaining drainage, sedimentation control, and proper abandonment of the property, including the introduction and maintenance of vegetation which conforms to the minimum requirements of ~~section subdivision 4-5-6~~ 4.5.f of this rule; and

~~3-12-3-f:~~ 3.12.c.6. All data obtained from the testing program.

**Note:** It may be necessary to obtain federal, state, or local permits prior to excavating materials from a borrow source near or within surface waters or natural wetlands. It is the responsibility of the applicant or property owner to obtain any such permits.

3.13. Bonding and Financial Assurance for Solid Waste Facilities.

The mechanisms used to demonstrate financial assurance under this ~~section~~ subsection must ensure that the funds necessary to meet the costs of closure, post-closure care, and corrective action for known releases will be available whenever they are needed, and include the requirements of ~~sections subdivisions 3-13-14, 3-13-15 and 3-13-16~~ 3.13.n, 3.13.o, and 3.13.p of this rule, and

~~3-13-1:~~ 3.13.a. Requirements for Commercial Solid Waste Facilities.

**Note:** Non-commercial solid waste facilities are exempt from the requirements of ~~section~~ subsection 3.13 of this rule.

~~3-13-1-a:~~ 3.13.a.1. The director will not approve a new, reissued, renewed, or modified permit for a commercial solid waste facility unless the applicant first submits to the director a bond or other form of financial assurance, as applicable, in accordance with this rule and the bond or other form of financial assurance is approved by the director.

~~3-13-1-b:~~ 3.13.a.2. The bond or



financial assurance must be submitted after the application is approved but before the permit, modification, transfer, assignment, or other permitting function is approved or issued. No permit will be issued until the bond or financial assurance is approved by the director and is in full force and effect.

~~3.13.1.c.~~ 3.13.a.3. A person who holds a valid Division permit to conduct a commercial solid waste activity but wishes to modify, transfer, assign, or perform any other permitting function must comply with ~~section paragraph 3.13.1.b~~ 3.13.a.2 of this rule, on the effective date of this ~~section paragraph~~ must file a bond or other type of financial assurance with the director prior to receiving the approval of the director for the permit, modification or other permitting function as required under this rule.

~~3.13.1.d.~~ 3.13.a.4. Applicability.

The requirements of this ~~section paragraph~~ apply to permittees of all SWLFs, except as provided in ~~section subdivision 3.13.1~~ 3.13.a. The requirements of this ~~section paragraph~~ are effective on the date specified in ~~40 CFR Part 258~~ 40CFR258 section 70(b), as amended. If a state or federal government entity should become a permittee in the State of West Virginia, they will be exempt from the requirements of this ~~section paragraph~~, since their debts and liabilities are the debts and liabilities of the state or the United States.

~~3.13.2.~~ 3.13.b. General Bonding and Financial Assurance Requirements.

~~3.13.2.a.~~ 3.13.b.1. All forms of financial assurance and bonds must be submitted under the requirements of this rule on a form prepared and furnished by the director, must be made payable to the State of West Virginia, and must provide for continuous liability from the initiation of operations at the facility for the full term of the permit and for at least thirty (30) years after final closure of the permit site. Any further

time period required to achieve compliance with the requirements of the closure plan of the permit or other requirements of the Division must be considered an additional liability period.

~~3.13.2.a.A.~~ 3.13.b.1.A. The use of any of the mechanisms listed in ~~section subsection~~ 3.13 of this rule, must ensure the satisfaction of the following criteria:

~~3.13.2.a.A.(a)~~ 3.13.b.1.A.1. That the amount of funds assured is sufficient to cover the costs of closure, post-closure care, and corrective action for known releases when needed;

~~3.13.2.a.A.(b)~~ 3.13.b.1.A.2. That funds will be available in a timely fashion when needed;

~~3.13.2.a.A.(c)~~ 3.13.b.1.A.3. The financial assurance mechanism(s) must in full force and effect ~~be~~ by the effective date of these requirements or prior to the initial receipt of solid waste, whichever is later, in the case of closure and post-closure care, and no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of ~~section subdivision 4.11.7~~ 4.11.g of this rule, until the permittee is released from the financial assurance requirements under ~~sections subdivisions 3.13.14, 3.13.15, and 3.13.16~~ 3.13.n, 3.13.o, and 3.13.p of this rule.

~~3.13.2.a.A.(d)~~ 3.13.b.1.A.4. The financial assurance mechanisms must be legally valid, binding, and enforceable under state and federal law.

~~3.13.2.b.~~ 3.13.b.2. If a permit applicant elects to offer a certificate or securities as a form of financial assurance or bond, then the cash deposit or market value of such securities or certificates must be equal to or greater than the sum of the bond.

~~3.13.2.c.~~ 3.13.b.3. All forms of

financial assurance or bonds must be conditioned on compliance with the Solid Waste Management Act, any rules promulgated thereunder, orders issued by the director, and the terms and conditions of the permit.

~~3.13.2.d.~~ 3.13.b.4. All forms of financial assurance or bonds will be reviewed for legality and form in accordance with established Division procedures.

~~3.13.2.e.~~ 3.13.b.5. All forms of financial assurance, or bonds will be placed with the state treasurer to be held in the name of the state in trust for the purpose for which the deposit is made when the permit is issued.

~~3.13.2.f.~~ 3.13.b.6. With the director's permission, the permittee may remove the deposit if it is first replaced with an equivalent or greater deposit.

~~3.13.2.g.~~ 3.13.b.7. If for any reason a permittee fails to maintain proper financial assurance or bonding, the director will issue a cease and desist order and revoke the permit and the permittee becomes fully liable for the amount of the bond.

~~3.13.2.h.~~ 3.13.b.8. The penal sum of any financial assurance must be in an amount at least equal to the sum of the current closure, post-closure care and/or corrective action cost estimate; as applicable.

~~3.13.3.~~ 3.13.c. Other Allowable Mechanisms of Financial Assurance or Bonding.

~~3.13.3.a.~~ 3.13.c.1. The director will accept the following types of financial assurance or bonding:

~~3.13.3.a.A.~~ 3.13.c.1.A. A surety bond;

~~3.13.3.a.B.~~ 3.13.c.1.B. A collateral bond (including cash and securities);

~~3.13.3.a.B.(a)~~ 3.13.c.1.B.1.  
Cash deposits;

~~3.13.3.a.B.(b)~~ 3.13.c.1.B.2.  
Collateral securities;

~~3.13.3.a.B.(c)~~ 3.13.c.1.B.3.  
Certificates, including;

~~3.13.3.a.B.(c)(A)~~  
3.13.c.1.B.3.(a) Bonds of the United States or its possessions;

~~3.13.3.a.B.(c)(B)~~  
3.13.c.1.B.3.(b) Bonds of the Federal Land Bank;

~~3.13.3.a.B.(c)(C)~~  
3.13.c.1.B.3.(c) Bonds of the Homeowners Loan Corporation;

~~3.13.3.a.B.(c)(D)~~  
3.13.c.1.B.3.(d) Full Faith and General Obligation bonds of the State of West Virginia or other states and of any West Virginia county, district, or municipality, or of other states;

~~3.13.3.a.C.~~ 3.13.c.1.C. Escrow Account.

An escrow account;

~~3.13.3.a.D.~~ 3.13.c.1.D. Collateral bonds; including;

~~3.13.3.a.D.(a)~~ 3.13.c.1.D.1.  
Letters of credit;

~~3.13.3.a.D.(b)~~ 3.13.c.1.D.2.  
Certificates of deposit; and

~~3.13.3.a.D.(c)~~ 3.13.c.1.D.3.  
Negotiable bonds.

~~3.13.3.a.E.~~ 3.13.c.1.E.  
Performance bonding fund participation (as established by the director);



~~3.13.3.a.F.~~ 3.13.c.1.F. Trust Fund.

~~3.13.3.a.G.~~ 3.13.c.1.G. State-Approved Mechanism (Reserved).

~~3.13.3.a.H.~~ 3.13.c.1.H. State Assumption of Responsibility (Reserved).

~~3.13.3.a.I.~~ 3.13.c.1.I. Use of Multiple Financial Mechanisms.

~~3.13.4.~~ 3.13.d. Special Terms and Conditions for Surety Bonds Guaranteeing Payment or Performance.

A permittee may demonstrate financial assurance for closure, post-closure care, or corrective action by obtaining a payment or performance surety bond which conforms to the requirements of this ~~section~~ subdivision.

~~3.13.4.a.~~ 3.13.d.1. The director will not accept the bond of a surety company that has failed, or unduly delayed, as determined by the director, in making payment on a forfeited surety bond.

~~3.13.4.a.A.~~ 3.13.d.1.A. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

~~3.13.4.b.~~ 3.13.d.2. The director will accept only the bond of a surety authorized to do business in this state when the surety bond is signed by an appropriate official of the surety as determined by the director. If the principal place of business of the surety is outside of this state, the surety bond must also be signed by an authorized resident agent of the surety.

~~3.13.4.c.~~ 3.13.d.3. The bond must provide that full payment will be made under the bond within thirty (30) days of receipt of the Division's declaration of forfeiture by the surety.

~~3.13.4.d.~~ 3.13.d.4. The director will not accept surety bonds from a surety company when the total bond liability to the Division for bonds filed by the permittee, the principal and related parties exceed the surety company's single risk limit.

~~3.13.4.d.A.~~ 3.13.d.4.A. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the permittee and to the director 120 days in advance of cancellation.

~~3.13.4.d.A.(a)~~ 3.13.d.4.A.1. If the surety cancels the bond, the permittee must obtain alternative financial assurance as specified in this ~~section~~ part.

~~3.13.4.d.A.(b)~~ 3.13.d.4.A.2. The permittee may cancel the bond only if alternative financial assurance is substituted as specified in this ~~section~~ part or if the permittee is no longer required to demonstrate financial responsibility in accordance with ~~sections~~ paragraphs ~~3.13.14.b,~~ ~~3.13.15.b,~~ ~~3.13.n.2,~~ ~~3.13.o.2,~~ or ~~3.13.16.b~~ 3.13.p.2 of this rule.

~~3.13.4.e.~~ 3.13.d.5. The bond must provide that the surety and the principal are jointly and severally liable for payment of the bond amount.

~~3.13.4.f.~~ 3.13.d.6. Surety Bond Forfeiture.

~~3.13.4.f.A.~~ 3.13.d.6.A. The director will provide in the bond that the amount must be confessed to judgment and execution upon forfeiture.

~~3.13.4.f.B.~~ 3.13.d.6.B. Any surety bond obtained by the permittee must state that the surety will become liable on the bond obligation should the permittee fail to perform as guaranteed by the bond.

~~3.13.4.g.~~ 3.13.d.7. The Division will

retain, during the term of the bond, and upon forfeiture of the bond, a property interest in the surety's guarantee of payment under the bond which may not be affected by the bankruptcy, insolvency, or other financial incapacity of the permittee or principal on the bond.

~~3.13.4.h.~~ 3.13.d.8. The bond must provide that the surety will give written notice to the principal and the Division within ten (10) days of a notice received or an action filed by or with a regulatory agency having jurisdiction over the surety alleging one of the following:

~~3.13.4.h.A.~~ 3.13.d.8.A. The insolvency or bankruptcy of the surety.

~~3.13.4.h.B.~~ 3.13.d.8.B. Violations of regulatory requirements applicable to the surety, when as a result of the violations, suspension or revocation of the surety's license to do business in this state or another state is under consideration by the regulatory agency.

~~3.13.4.i.~~ 3.13.d.9. Surety Bonds for Corrective Action, Closure and Post-Closure Care.

~~3.13.4.i.A.~~ 3.13.d.9.A. A permittee may demonstrate financial assurance for corrective action, closure and post-closure care by obtaining a performance bond which conforms to the requirements of this ~~section~~ subparagraph.

~~3.13.4.i.B.~~ 3.13.d.9.B. A bond for corrective action must be effective before the initial receipt of waste, or before the effective date of this rule, whichever is later.

~~3.13.4.i.C.~~ 3.13.d.9.C. A bond for closure or post-closure care, must be effective no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of ~~section subdivision~~ 4.11.7 4.11.g.

~~3.13.4.j.~~ 3.13.d.10. Standby Trust Fund.

~~3.13.4.j.A.~~ 3.13.d.10.A. As provided in ~~section paragraph~~ 3.13.4.j. 3.13.d.10 of this rule, the permittee must establish a standby trust fund.

~~3.13.4.j.B.~~ 3.13.d.10.B. The standby trust fund must meet the requirements of ~~section subsection~~ 3.13 of this rule, except the requirements for initial payment and subsequent annual payments specified in ~~section paragraph~~ 3.13.11.a 3.13.k.1 of this rule.

~~3.13.4.k.B.~~ 3.13.d.10.C. Payments made under the terms of the bond will be deposited by the surety directly into the standby trust fund.

~~3.13.4.k.C.~~ 3.13.d.10.D. Payments from the trust fund must be approved by the trustee.

~~3.13.5.~~ 3.13.e. General Terms and Conditions for Collateral Bonds.

~~3.13.5.a.~~ 3.13.e.1. The applicant may submit a collateral bond in one or more of the following forms:

~~3.13.5.a.A.~~ 3.13.e.1.A. Cash deposits.

~~3.13.5.a.B.~~ 3.13.e.1.B. Certified checks, cashiers' checks, or treasurer's checks which are issued, drawn on or certified by a bank or banking institution authorized to do business in this state.

~~3.13.5.a.C.~~ 3.13.e.1.C. Automatically renewable and assignable certificates of deposit from banks or banking institutions authorized to do business in this state.

~~3.13.5.a.D.~~ 3.13.e.1.D. Automatically renewable, irrevocable standby letters of credit from banks or banking institutions authorized to do business in this state.

~~3-13-5-a-E~~ 3.13.e.1.E. Negotiable bonds of the United States Government; the Federal Land Bank; the Homeowners Loan Corporation; and Full Faith and General Obligation bonds of the State of West Virginia or other states, and of any West Virginia county, district, municipality, or of other states.

~~3-13-5-b~~ 3.13.e.2. The market value of the collateral deposited must be at least equal to or greater than the sum of the required bond amount.

~~3-13-5-c~~ 3.13.e.3. The director will place collateral submitted under this rule with the state treasurer, who is responsible for its custody and safe keeping until released or collected and deposited in an appropriate fund designated by the director.

~~3-13-5-d~~ 3.13.e.4. Collateral must be in the name of the permittee, and pledged and assigned to the state free and clear of claims or rights. The pledge or assignment must vest in the State a property interest in the collateral which must remain until released under the terms of this rule, and may not be affected by the bankruptcy, insolvency, or other financial incapacity of the permittee.

~~3-13-5-e~~ 3.13.e.5. The state will ensure that its ownership rights to collateral deposited are established to make the collateral readily available to the state upon forfeiture. The director may require proof of ownership, and other means such as secondary agreements, as he or she deems necessary to meet the requirements of this rule. If the director determines that collateral deposited does not meet the requirements of this rule, he or she may take action under the law to protect the state's interest in the collateral.

~~3-13-6~~ 3.13.f. Collateral Bonds; Escrow.

~~3-13-6-a~~ 3.13.f.1. The director may authorize the permittee to establish an escrow

account deposited in one or more federally-insured accounts payable on demand only to the director, or directly deposited with the director.

~~3-13-6-b~~ 3.13.f.2. Escrow funds deposited in federally-insured accounts must not exceed the maximum insured amount under applicable federal insurance programs such as the Federal Deposit Insurance Corporation (F.D.I.C.) or the Federal Savings and Loan Insurance Corporation (F.S.L.I.C.).

~~3-13-6-c~~ 3.13.f.3. Interest paid on an escrow account must be retained in the escrow account and applied to the bond value of the escrow account unless the director has approved that the interest be paid to the permittee. In order to qualify for interest payment, the permittee must request such action in writing during the permit application process.

~~3-13-7~~ 3.13.g. Collateral Bonds; Letters of Credit.

A permittee may satisfy the requirements of this ~~section~~ subdivision by obtaining an irrevocable standby letter of credit which conforms to the requirements of this ~~section~~ subdivision.

~~3-13-7-a~~ 3.13.g.1. Bank letters of credit submitted as collateral for collateral bonds are subject to the following conditions:

~~3-13-7-a-A~~ 3.13.g.2. The letter of credit must be a standby or guarantee letter of credit issued by a federally-insured or equivalently protected bank or banking institution authorized to do business in this State. The letter of credit may not be issued without a credit analysis substantially equivalent to a credit analysis applicable to a potential borrower in an ordinary loan situation. A letter of credit so issued must be supported by an applicant's unqualified obligation to reimburse the issuer for monies paid under the letter of credit.

~~3.13.7.a.B.~~ 3.13.g.1.B. The letter of credit must be irrevocable, and must be so designated. The letter of credit must be issued for a period of at least one year in an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable, except as provided in ~~section paragraph 3.13.11.a~~ 3.13.k.1 of this rule.

~~3.13.7.a.B.(a)~~ 3.13.g.1.B.1. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless the issuing institution has canceled the letter of credit by sending notice of cancellation by certified mail to the permittee and to the director 90 days in advance of cancellation.

~~3.13.7.a.B.(b)~~ 3.13.g.1.B.2. If the letter of credit is canceled by the issuing institution, the permittee must obtain alternative financial assurance or bonding.

~~3.13.7.a.B.(c)~~ 3.13.g.1.B.3. The permittee may cancel the letter of credit only if alternative financial assurance or bonding is substituted as specified in this ~~section part~~ or if the permittee is released from the requirements of this ~~section part~~ in accordance with ~~sections paragraphs 3.13.14.b, 3.13.15.b, or 3.13.16.b~~ 3.13.l.2, 3.13.m.2, or 3.13.n.2 of this rule.

~~3.13.7.a.B.(d)~~ 3.13.g.1.B.4. A letter from the permittee referring to the letter of credit by number, issuing institution, and date, and providing the following information: name, and address of the facility, and the amount of funds assured, must be included with the letter of credit in the operating record.

~~3.13.7.a.C.~~ 3.13.g.1.C. The director may not accept letters of credit issued for an applicant when the amounts of the letter of credit, aggregated with other loans and credits extended to the applicant, exceeds the issuer's legal lending limit for that applicant as defined in the United States Banking Code (12 U.S.C. §§21-

220).

~~3.13.7.a.D.~~ 3.13.g.1.D. Letters of credit must name the West Virginia Division of Environmental Protection as beneficiary and must be payable to the Division upon demand, in part or in full, upon presentation of the Division's drafts, at sight. The Division's right to draw upon the letter of credit does not require documentary or other proof by the Division that the applicant has violated the conditions of the bond, the permit, or another requirement.

~~3.13.7.a.E.~~ 3.13.g.1.E. The director will not accept letters of credit from a bank which has failed or delayed in making payment on a letter of credit previously submitted as collateral to the Division.

~~3.13.7.b.~~ 3.13.g.2. The director will not accept letters of credit from a bank for any person, for all permits held by that person, in excess of three (3) times the company's maximum single obligation as provided by state law.

~~3.13.7.c.~~ 3.13.g.3. The director will provide in the indemnity agreement that the amount will be confessed to judgement upon forfeiture.

~~3.13.7.d.~~ 3.13.g.4. The letter of credit must provide that:

~~3.13.7.d.A.~~ 3.13.g.4.A. The bank will give prompt notice to the permittee and the director of any notice received or action filed alleging the insolvency or bankruptcy of the bank, or alleging any violations of regulatory requirements which could result in suspension or revocation of the bank's charter or license to do business.

~~3.13.7.d.B.~~ 3.13.g.4.B. In the event the bank becomes unable to fulfill its obligations under the letter of credit for any reason, notice must be given immediately to the permittee and the director.

~~3.13.7.d.C.~~ 3.13.g.4.C. Upon the incapacity of a bank by reason of bankruptcy, insolvency, suspension or revocation of its charter or license, the permittee must be deemed to be without bond coverage. The director must issue an order against any operator who is without bond coverage. The notice will specify the period within which bond coverage must be replaced. If the permittee cannot replace the bond within the specified period of time, then the director must immediately revoke the permit. The permittee will be fully liable for the amount of the bond coverage.

~~3.13.7.d.D.~~ 3.13.g.4.D. The estimated bond value of all collateral posted as bond assurance will be subject to a margin bond value to market value ratio as determined by the director. This margin will reflect legal and liquidation fees, as well as value depreciation, marketability and fluctuations which might affect the net cash available to the director in performing closure or other remedial measures. The bond value of collateral may be evaluated at any time, but must be evaluated as part of permit renewal. In no case may the bond value exceed the market value.

~~3.13.7.e.~~ 3.13.g.5. The issuing bank must waive the rights of setoff or liens which it has or might have against the letter of credit.

~~3.13.7.f.~~ 3.13.g.6. If the director collects an amount under the letter of credit due to failure of the permittee to replace the letter of credit after demand by the director, the Division will hold the proceeds as cash collateral.

~~3.13.7.g.~~ 3.13.g.7. After the letter of credit is approved by the director, the permittee must retain a copy of the letter of credit in the facility operating record.

~~3.13.7.h.~~ 3.13.g.8. The letter of credit must be effective before the initial receipt of waste or before the effective date of this ~~section~~ paragraph, whichever is later, in the case of

closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of ~~section subdivision 4.11.7~~ 4.11.f of this rule.

~~3.13.7.i.~~ 3.13.g.9. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

~~3.13.8.~~ 3.13.h. Collateral Bonds; Certificates of Deposit.

~~3.13.8.a.~~ 3.13.h.1. Certificates of deposit submitted as collateral for collateral bonds are subject to the following conditions:

~~3.13.8.a.A.~~ 3.13.h.1.A. The certificates of deposit must be made payable to the Division or the permittee and the Division and must be assigned to the Division by the permittee, in writing, as required by the director and on forms provided by the director. The assignment must be recorded upon the books of the bank issuing the certificate.

~~3.13.8.a.B.~~ 3.13.h.1.B. The certificate of deposit must be issued by a federally-insured or equivalently protected bank or banking institution which is authorized to do business in this state.

~~3.13.8.a.C.~~ 3.13.h.1.C. The director will not accept certificates of deposit from a bank or banking institution when the accumulated total of certificates of deposit issued by the bank or banking institution for the operator is in excess of one hundred thousand dollars (\$100,000), or the maximum insurable amount as determined by the F.D.I.C. or the F.S.L.I.C., if the banking institution is insured by the F.D.I.C. or F.S.L.I.C. If it is insured by an equivalent method administered by the state, similar limits apply.

~~3.13.8.a.D.~~ 3.13.h.1.D. The certificate of deposit must state that the bank



issuing it waives the rights or setoff or liens which it has or might have against the certificate.

~~3-13.8.a.E.~~ 3.13.h.1.E. The certificate of deposit must be automatically renewable and fully assignable to the state. Certificates of deposit must state on the face that they are automatically renewable.

~~3-13.8.a.F.~~ 3.13.h.1.F. The permittee must submit certificates of deposit in amounts which will allow the Division to liquidate the certificates prior to maturity, upon forfeiture, for the full amount of the bond determined in accordance with and required by this rule, without penalty to the Division.

~~3-13.8.a.G.~~ 3.13.h.1.G. The director will not accept certificates of deposit from banks which have failed or unduly delayed in making payment on certificates of deposit which have previously been submitted as collateral to the Division.

~~3-13.8.a.H.~~ 3.13.h.1.H. The permittee is not entitled to interest accruing after forfeiture is declared by the Division, unless and until the forfeiture declaration is ruled invalid by a court having jurisdiction over the Division, and the ruling is final.

~~3-13.9.~~ 3.13.i. Collateral Bonds; Negotiable Bonds.

~~3-13.9.a.~~ 3.13.i.1. Negotiable bonds submitted and pledged as collateral for collateral bonds are subject to the following conditions:

~~3-13.9.a.A.~~ 3.13.i.1.A. The director may determine the current market value of governmental securities for the purpose of establishing the value of the securities for bond deposit.

~~3-13.9.a.B.~~ 3.13.i.1.B. The current market value must be at least equal to the amount of the required bond.

~~3-13.9.a.C.~~ 3.13.i.1.C. The Division may periodically revalue the securities and may require additional amounts if the current market value is insufficient to satisfy the bond amount requirements for the facility.

~~3-13.9.a.D.~~ 3.13.i.1.D. The permittee may request and receive the interest accruing on governmental securities with the Division as the same becomes due and payable. No interest will be paid for post-forfeiture interest accruing during appeals and after resolution of the appeals, when the forfeiture is adjudicated, decided, or settled in favor of the state.

~~3-13.10.~~ 3.13.j. Use of Multiple Mechanisms

~~3-13.10.a.~~ 3.13.j.1. The director may accept financial assurance or bond which is comprised of more than one financial mechanism per facility, as listed in this rule, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable.

~~3-13.10.a.A.~~ 3.13.j.1.A. The instruments chosen must be construed as part of the entire bond for the facility.

~~3-13.10.a.B.~~ 3.13.j.1.B. The director may refuse to accept the bond if he or she determines that the financial guarantee of the bond is unacceptable, or for another reason does not meet the purposes of the Act, this rule, or orders of the director.

~~3-13.10.a.C.~~ 3.13.j.1.C. The financial test and a guarantee provided by a corporate parent, sibling, or grandparent may not be combined if the financial statements of the two firms are consolidated.

~~3-13.11.~~ 3.13.k. Other Forms of Bonding.

Other forms of bonding including, but not limited to;

~~3.13.11.a.~~ 3.13.k.1. Trust Fund.

~~3.13.11.a.A.~~ 3.13.k.1.A. A permittee may satisfy the requirements of this ~~section~~ subparagraph by establishing a trust fund which conforms to the requirements of this ~~section~~ subparagraph.

~~3.13.11.a.A.(a)~~ 3.13.k.1.A.1.

The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

~~3.13.11.a.A.(b)~~ 3.13.k.1.A.2.

A copy of the trust agreement must be placed in the facility's operating record.

~~3.13.11.a.B.~~ 3.13.k.1.B. Payment into the trust fund must be made annually by the permittee over the term of the initial permit or over the remaining life of the SWLF, whichever is shorter, in the case of a trust fund for closure or post-closure care, or over one-half of the estimated length of the corrective action program in the case of corrective action for known releases. This period is referred to as the pay-in period.

~~3.13.11.a.C.~~ 3.13.k.1.C. For a trust fund used to demonstrate financial assurance for closure and post-closure care, the first payment into the trust fund must be at least equal to the current cost estimate for closure and post-closure care, except as provided in ~~section~~ paragraph ~~3.13.11.e~~ 3.13.k.3 of this rule, divided by the number of years in the corrective action pay-in period as defined in ~~section~~ subparagraph ~~3.13.11.a.B~~ 3.13.k.1.B of this ~~section~~ rule.

~~3.13.11.a.D.~~ 3.13.k.1.D. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{CE}-\text{CV}}{\text{Y}}$$

where CE is the current cost estimate for closure or post-closure care (updated for inflation or other changes), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

~~3.13.11.a.E.~~ 3.13.k.1.E. For a trust fund used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half of the current cost estimate for corrective action, except as provided in ~~section~~ paragraph ~~3.13.11.e~~ 3.13.k.3 of this rule, divided by the number of years in the corrective action pay-in period as defined in ~~section~~ subparagraph ~~3.13.11.a.B~~ 3.13.k.1.B of this rule.

~~3.13.11.a.E.(a)~~ 3.13.k.1.E.1.

The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{RB}-\text{CV}}{\text{Y}}$$

where RB is the most recent estimate of the required trust fund balance for corrective action (i.e., the total costs that will be incurred during the second half of the corrective action period), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

~~3.13.11.a.F.~~ 3.13.k.1.F. The initial payment into the trust fund must be made before the initial receipt of waste or before the effective ~~data date~~ date of ~~section 40 CFR Part 258.70(b)~~ 40CFR258.70(b), whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of ~~section~~ subdivision ~~4.11.7~~ 4.11.g of this rule.

~~3.13.11.a.G.~~ 3.13.k.1.G. If the permittee establishes a trust fund after having

used one or more alternative mechanisms specified in this ~~section~~ subparagraph, the initial payment into the trust fund must be at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of ~~section subdivision 3.13.11~~ 3.13.k of this rule.

~~3.13.11.a.H.~~ 3.13.k.1.H. The permittee, or other person authorized to conduct closure, post-closure care, or corrective action activities may request reimbursement from the trustee for these expenditures.

~~3.13.11.a.H.(a)~~ 3.13.k.1.H.1. Requests for reimbursement will be granted by the trustee only if sufficient funds are remaining in the trust fund to cover the remaining costs of closure, post-closure care, or corrective action, and if justification and documentation of the cost is placed in the operating record.

~~3.13.11.a.H.(b)~~ 3.13.k.1.H.2. The permittee must notify the director that the documentation of the justification for reimbursement has been placed in the operating record and that reimbursement has been received.

~~3.13.11.a.I.~~ 3.13.k.1.I. The trust fund may be terminated by the permittee only if the permittee substitutes alternative financial assurance as specified in this ~~section~~ subparagraph or if he or she is no longer required to demonstrate financial responsibility in accordance with the requirements of ~~sections paragraphs 3.13.14.b, 3.13.15.b, or 3.13.16.b~~ 3.13.n.2, 3.13.o.2 or 3.13.p.2 of this rule.

~~3.13.11.b.~~ 3.13.k.2. State-Approved Mechanism. (Reserved)

~~3.13.11.c.~~ 3.13.k.3. State Assumption of Responsibility. (Reserved)

~~3.13.12.~~ 3.13.l. Replacement of Existing Bond.

~~3.13.12.a.~~ 3.13.l.1. The director may allow a permittee to replace an existing surety or collateral bond with another surety or collateral bond, if the liability which has accrued against the bond, the permittee and the facility is transferred to the replacement bond. The replacement bond must include an endorsement by the permittee acknowledging the retroactivity of the liability to the date of issue of the original solid waste permit or a prior date determined by the director. The bond amount for this replacement bond will be determined under this rule, but may not be less than the amount on deposit with the Division.

~~3.13.12.b.~~ 3.13.l.2. The Division will not release existing bonds until the permittee has submitted and the director has approved acceptable replacement bonds that are in full force and effect. A replacement of bonds under ~~section subdivision 3.13.12~~ 3.13.l of this rule does not constitute a release of bond under this rule.

~~3.13.13.~~ 3.13.m. Bond Amounts.

~~3.13.13.a.~~ 3.13.m.1. In accordance with the provisions of W. Va. Code §22-15-12, all permits must be bonded for at least ten thousand dollars (\$10,000), or a sufficient amount to satisfy all of the requirements of this rule, whichever is the higher amount.

~~3.13.14.~~ 3.13.n. Financial Assurance for Closure.

~~3.13.14.a.~~ 3.13.n.1. The permittee must have a detailed written estimate, in current dollars, of the cost of hiring a third party to close the largest area of all SWLFs ever requiring a final cover as required under section 6 of this rule at any time during the active life in accordance with the closure plan.

~~3.13.14.a.A.~~ 3.13.n.1.A. The permittee must notify the director in writing of that estimate and maintain a copy in the operating record.



~~3.13.14.a.A.(a)~~ 3.13.n.1.A.1.

The cost estimate must equal the cost of closing the largest area of all SWLFs ever requiring a final cover at any time during the active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see ~~section part 6.1.5.e.A.(b)~~ 6.1.e.3.A.2. of this rule).

~~3.13.14.a.A.(b)~~ 3.13.n.1.A.2.

During the active life of the SWLF, the permittee must annually adjust the closure cost estimate for inflation.

~~3.13.14.a.A.(c)~~ 3.13.n.1.A.3.

The permittee must increase the closure cost estimate and the amount of financial assurance provided under ~~sections part 3.13.14.a.A.(b)~~ 3.13.l.1.A.2 and ~~paragraph 3.13.14.b~~ 3.13.l.2 of this rule, if changes to the closure plan or SWLF conditions increase the maximum cost of closure at any time during the remaining active life.

~~3.13.14.a.A.(d)~~ 3.13.n.1.A.4.

The permittee may reduce the closure cost estimate and the amount of financial assurance provided under ~~sections paragraph 3.13.14.b~~ 3.13.l.2 and ~~paragraph 3.13.14.b.A~~ 3.13.l.2.A of this rule, if the cost estimate exceeds the maximum cost of closure at any time during the remaining life of the SWLF.

~~3.13.14.a.A.(d)(A)~~

3.13.n.1.A.4.(a) The permittee must notify the director that the justification for the reduction of the closure cost estimate and the amount of financial assurance has been placed in the operating record.

~~3.13.14.b.~~ 3.13.n.2. The permittee of each SWLF's operating record must establish financial assurance for closure of the SWLF in compliance with ~~section subsection~~ 3.13 of this rule.

~~3.13.14.b.A.~~ 3.13.n.2.A. The permittee must provide continuous coverage for

closure until released from financial assurance requirements by demonstrating compliance with section 6 of this rule.

~~3.13.15.~~ 3.13.o. Financial Assurance for Post-Closure Care.

~~3.13.15.a.~~ 3.13.o.1. The permittee must have, at all times, a detailed written estimate, in current dollars, of the cost of hiring a third party to conduct post-closure care for the SWLF in compliance with the post-closure plan developed under ~~section subsection~~ 6.3 of this rule.

~~3.13.15.a.A~~ 3.13.o.1.A. The post-closure cost estimate used to demonstrate financial assurance in ~~sections paragraph 3.13.15.b~~ 3.13.o.2 and ~~subparagraph 3.13.15.b.A~~ 3.13.o.2.A of this ~~section subparagraph~~ must account for the total costs of conducting post-closure care, including annual and periodic costs as described in the post-closure plan over the entire post-closure care period. The permittee must notify the director that a copy of the estimate has been placed in the operating record.

~~3.13.15.a.A.(a)~~ 3.13.o.1.A.1.

The cost estimate for post-closure care must be based on the most expensive costs of post-closure care during the post-closure care period.

~~3.13.15.a.A.(b)~~ 3.13.o.1.A.2.

During the active life of the SWLF and during the post-closure care period, the permittee must annually adjust the post-closure cost estimate for inflation.

~~3.13.15.a.A.(c)~~ 3.13.o.1.A.3.

The permittee must increase the post-closure care cost estimate and the amount of financial assurance provided under ~~sections paragraph 3.13.15.b~~ 3.13.m.2 and ~~subparagraph 3.13.15.b.A~~ 3.13.m.2.A of this rule, if changes in the post-closure plan or SWLF conditions increase the maximum costs of post-closure care.

~~3.13.15.a.A.(d)~~ 3.13.o.1.A.4.

The permittee may reduce the post-closure cost estimate and the amount of financial assurance provided under ~~section paragraph 3.13.15.b 3.13.o.2~~ of this rule, if the cost estimate exceeds the maximum costs of post-closure care remaining over the post-closure care period.

~~3.13.15.a.A.(d)(A)~~

3.13.o.1.A.4.(a) The permittee must notify the director and receive written approval of the director of the justification for the reduction of the post-closure cost estimate and the amount of financial assurance prior to placing these documents in the operating record.

~~3.13.15.b. 3.13.o.2.~~ The permittee of each SWLF must establish, in a manner in accordance with ~~section subdivision 3.13.15 3.13.o~~ of this rule, financial assurance for the costs of post-closure care as required under ~~section subsection 6.3~~ of this rule.

~~3.13.15.b.A. 3.13.o.2.A.~~ The permittee must provide continuous coverage for post-closure care until released from financial assurance requirements for post-closure care by demonstrating compliance with ~~section paragraph 6.3.7.a 6.3.g.1~~ of this rule.

~~3.13.16. 3.13.p.~~ Financial Assurance for Corrective Action.

~~3.13.16.a. 3.13.p.1.~~ A permittee of a SWLF required to undertake a corrective action program under ~~section subdivision 4.11.7 4.11.g~~ of this rule must have a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the corrective action in accordance with the program required under ~~section subdivision 4.11.7 4.11.g~~ of this rule.

~~3.13.16.a.A. 3.13.p.1.A.~~ The corrective action cost estimate must account for the total costs of corrective action activities as described in the corrective action plan for the entire corrective action period.

~~3.13.16.a.A.(a)~~ 3.13.p.1.A.1.

The permittee must notify the director that the estimate has been placed in the operating record.

~~3.13.16.a.B. 3.13.p.1.B.~~

The permittee must annually adjust the estimate for inflation until the corrective action program is completed in accordance with ~~section paragraph 4.11.7.f 4.11.g.6~~ of this rule.

~~3.13.16.a.C. 3.13.p.1.C.~~

The permittee must increase the corrective action cost estimate and the amount of financial assurance provided under ~~section paragraph 3.13.16.b 3.13.p.2~~ of this rule, if changes in the corrective action program or SWLF conditions increase the maximum costs of corrective action.

~~3.13.16.a.D. 3.13.p.1.D.~~

The permittee may reduce the amount of the corrective action cost estimate and the amount of financial assurance provided under ~~section paragraph 3.13.16.b 3.13.p.2~~ of this rule, if the cost estimate exceeds the maximum remaining costs of corrective action.

~~3.13.16.a.D.(a)~~ 3.13.p.1.D.1.

The permittee must notify the director that the justification for the reduction of the corrective action cost estimate and the amount of financial assurance has been placed in the operating record.

~~3.13.16.b. 3.13.p.2.~~ The permittee of each SWLF required to undertake a corrective action program under ~~section subdivision 4.11.7 4.11.g~~ of this rule must establish, in a manner in accordance with ~~section subsection 3.13~~ of this rule, financial assurance for the most recent corrective action program.

~~3.13.16.b.A. 3.13.p.2.A.~~

The permittee must provide continuous coverage for corrective action until released from financial assurance requirements for corrective action by demonstrating compliance with ~~sections paragraphs 4.11.7.f 4.11.g.6 and 4.11.7.g 4.11.g.7~~ of this rule.

### 3.14. Background Investigation Disclosure Statement.

#### ~~3.14.1.~~ 3.14.a. Applicability.

Every applicant for a solid waste facility permit must file a background investigation disclosure statement with the director at the time the initial application is filed, unless exempt from such disclosure under the provisions of ~~section subdivision 3.14.4~~ 3.14.d of this rule.

#### ~~3.14.2.~~ 3.14.b. Copies and Fees.

Background investigation disclosure statements must be filed by submitting a notarized original and one (1) certified copy of all papers and other applicable documents, to the director accompanied by a nonrefundable investigation fee in accordance with the schedule of fees in Appendix IV to this rule.

~~3.14.2.a.~~ 3.14.b.1. Additional certified copies of background investigation disclosure statements, or any portions thereof, must be supplied upon the request of the director.

~~3.14.2.b.~~ 3.14.b. Within sixty (60) days of receipt of a background investigation disclosure statement from a permit applicant, the director must advise the permit applicant if the background investigation disclosure statement is incomplete on its face, and must specify what additional information is required.

#### ~~3.14.3.~~ 3.14.c. Fingerprinting Requirements.

Any applicant required to be listed in the background investigation disclosure statement, must be fingerprinted for identification and investigation purposes in accordance with procedures established by the director.

~~3.14.3.a.~~ 3.14.c.1. Completed fingerprint cards must be supplied by the applicant with the background investigation

disclosure statement, when submitted. The applicant must arrange for the taking of fingerprints.

~~3.14.3.b.~~ 3.14.c.2. Fingerprints must be taken and verified by an employee of a police agency authorized to take fingerprints.

**Note:** Most local police departments and state police will provide this service. (Some charge a fee.)

#### ~~3.14.4.~~ 3.14.d. Exemptions.

The following persons are exempted from the requirement to submit a background investigation disclosure statement:

~~3.14.4.a.~~ 3.14.d.1. Any person who is an employee of any department, division, agency, commission or authority of the federal, state, county, or municipal government or agency thereof.

~~3.14.4.b.~~ 3.14.d.2. Any person whose application or permit is solely for a Class E, or Class F facility.

#### ~~3.14.5.~~ 3.14.e. Contents of Background Investigation Disclosure Statement.

The background investigation disclosure statement must be filed on forms supplied by the director and must be completed in accordance with W. Va. Code §22-15-5 and include the following:

~~3.14.5.a.~~ 3.14.e.1. The applicant or any officer, director, or manager, any shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise including ultimate parent corporations, and any other person conducting or managing the affairs of the applicant or the proposed permitted premises;

~~3.14.5.b.~~ 3.14.e.2. The disclosure statement must contain the full name, business

address, home address, date of birth, social security number, a description of the applicant's experience and credentials including any past or present permits for the collection, transportation, treatment, storage or disposal of solid waste or hazardous waste, that are or have been issued to or possessed by the applicant and any person or persons required to be listed by ~~section paragraph~~ 3-14.5-a 3.14.e.1 of this rule;

~~3-14.5.e.~~ 3.14.e.3. A listing of any agencies outside of West Virginia which had, or has regulatory responsibility over the applicant in connection with its collection, transportation, treatment, storage, or disposal of solid waste or hazardous waste;

~~3-14.5.d.~~ 3.14.e.4. An addendum form must be completed and filed with each disclosure statement for each relation (spouse, sibling, parent or child) engaged in the collection, transportation, treatment, storage or disposal of solid or hazardous waste; and

~~3-14.5.e.~~ 3.14.e.5. Any other information the director may require that relates to the competency, reliability or good character of the applicant, or as required by ~~section W. Va. Code §22-15-5 of the Code.~~

~~3-14.6.~~ 3.14.f. Signature.

~~3-14.6.a.~~ 3.14.f.1. Background investigation disclosure statements must be signed by each of the following:

~~3-14.6.a.A.~~ 3.14.f.1.A. If of a corporation, by its president, its chairman of the board, any other chief executive officer thereof, its secretary and its treasurer.

~~3-14.6.a.B.~~ 3.14.f.1.B. If of a partnership, by each of its partners; if of a limited partnership, only by each of its general partners.

~~3-14.6.a.C.~~ 3.14.f.1.C. If of any other business concern, by its chief executive

officer, its secretary, and its treasurer.

~~3-14.6.a.D.~~ 3.14.f.1.D. If of a natural person, by the person him, or herself.

~~3-14.6.b.~~ 3.14.f.2. All signatures must be signed in ink and dated on original papers. The name and address of the signatory must be typed, stamped, or legibly printed beneath each signature. All signatures must be notarized.

~~3-14.7.~~ 3.14.g. Change of Information on Background Investigation Disclosure Statement.

Where an applicant has an application pending before the director and any of the information required to be included in a background investigation disclosure statement changes, or any additional information must be added after the filing of the statement, the applicant must provide that change of information to the director in writing within thirty (30) days of the change or addition.

~~3-14.8.~~ 3.14.h. Reporting Requirements.

Permittees must report to the director within thirty (30) days any changes or additions in the following information required to be included in the background investigation disclosure statement:

~~3-14.8.a.~~ 3.14.h.1. The name of the permittee or applicant;

~~3-14.8.b.~~ 3.14.h.2. The names or identities of any applicant or any officer, director, or manager, thereof, shareholder owning five percent (5) or more of its capital stock, beneficial or otherwise, including ultimate parent corporations, and any other person conducting or managing the affairs of the applicant or the proposed permitted premises;

~~3-14.8.c.~~ 3.14.h.3. The name and business address of any company which collects, transports, treats, stores, or disposes of solid waste

or hazardous waste in which the permittee acquires an equity interest:

~~3-14.8.d.~~ 3.14.h.4. A listing and explanation of any notices of violation, orders, or license revocations issued by any state or federal authority:

~~3-14.8.d.A.~~ 3.14.h.4.A. Any judgement of liability or conviction rendered against the permittee or against any key employee, officer, director, or manager thereof, shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise, or other person conducting or managing the affairs of the applicant or the proposed permitted premises.

~~3-14.8.e.~~ 3.14.h.5. Changes of information required to be reported pursuant to ~~section paragraph 3-14.8.f~~ 3.14.h.6 of this rule may be filed by letter or on copies of applicable portions of background investigation disclosure statement forms. The person filing the report of change must swear to or affirm the truth of the information contained therein.

~~3-14.8.f.~~ 3.14.h.6. Filing of Changes of Information.

Changes of information must be filed by submitting an original and one certified copy to the director.

~~3-14.9.~~ 3.14.i. Annual Updates.

The background investigation disclosure statement annual updates must be filed yearly on the anniversary of the permit issuance. It must be filed on forms supplied by the director and must contain all changes including but not limited to deletions in officers, directors, managers, owners, companies, etc. that have occurred since the submittal of previous application. If there have been any additions to the officers, directors, managers, shareholders owning five percent (5%) or more of capital stock, beneficial or otherwise; general or limited partners; any person performing

a function similar to the director; United States parent corporation, including the ultimate parent corporation; agents; or associates of the permittee, a background investigation disclosure statement application must be filed with the Division including proper filing fees and fingerprint cards.

~~3-14.10.~~ 3.14.j. Notarization of Annual Updates.

Annual updates must be notarized.

~~3-14.11.~~ 3.14.k. Requirement to File New Background Investigation Disclosure Statement.

Where an applicant or permittee has submitted multiple amendments to its background investigation disclosure statement, or the information concerning an applicant or permittee has undergone substantial change, or if the background investigation disclosure statement currently on file with the director is more than five (5) years old, the director may require the applicant or permittee to file a new background investigation disclosure statement.

~~3-14.12.~~ 3.14.l. Additional Information; Duty to Cooperate.

All applicants and permittees have the continuing duty to provide any assistance or information requested by the director and to cooperate in any inquiry, investigation, or hearing conducted by the director. If, upon issuance of formal request to answer any inquiry or produce information, evidence or testimony, and applicant or permittee refuses to comply, the permit of that person may be denied or revoked by the director.

~~3-14.13.~~ 3.14.m. Physical Evidence.

Upon request, the applicant must supply physical evidence, including, but not limited to, photographs or handwriting exemplars of any person listed on the background investigation disclosure statement or any amendment thereof.



~~3.14.14.~~ 3.14.n. Disqualification  
Criterion.

No permit may be approved by the director unless the applicant demonstrates compliance with the provisions of W. Va. Code §22-15-5.

~~3.14.15.~~ 3.14.o. Cause for Permit  
Revocation.

In addition to any other cause set forth elsewhere in this rule, any permit may be revoked for any violation of W. Va. Code §22-15-5.

~~3.14.16.~~ 3.14.p. Severance of  
Disqualifying Individuals.

Notwithstanding the disqualification of any applicant or permittee pursuant to these rules, the director may issue or renew a permit if the applicant or permittee severs the interest of, or affiliation with, the person who would otherwise cause that disqualification.

~~3.14.16.a.~~ 3.14.p.1. Where the disqualifying individual is the owner of any equity interest or interest in the debt liability of the permittee or applicant, that person must completely divest himself of that interest. Where immediate sale of the interest would work an economic hardship on the individual, the permittee or applicant, at the director's discretion may allow for divestiture over a period of time not to exceed one (1) year.

~~3.14.16.b.~~ 3.14.p.2. Arrangements such as blind trusts will be acceptable only as part of divestiture arrangement under which the trustee is obliged to sell the disqualifying individual's interest within a period not to exceed two (2) years.

~~3.14.16.c.~~ 3.14.p.3. Before the director will issue or renew a permit to an applicant or permittee which has severed a disqualifying individual, the applicant or permittee must submit to the director an affidavit,

sworn to by the chief executive officer, attesting to the severance of the disqualifying individual, and describing the terms, circumstances, and conditions of that severance. Any instruments pertaining to that severance (such as a trust agreement) must be submitted with the affidavit.

~~3.14.17.~~ 3.14.q. Confidential  
Information.

Any information received pursuant to ~~section~~ subsection 3.14 of this rule must be kept confidential by the Division to the extent allowable by state law including W. Va. Code §29B-1-1 et seq.

~~3.14.18.~~ 3.14.r. Convicted Persons  
Generally.

No permittee may knowingly hire as an officer or director any person who has been convicted of any of the offenses enumerated in W. Va. Code §22-15-5(c) without first submitting a background investigation disclosure statement to and obtaining the approval of the director. No permittee shall knowingly allow any person who has been convicted of any of the crimes enumerated in W. Va. Code §22-15-5(c) to acquire an equity interest or debt liability interest without first submitting a background investigation disclosure statement to and obtaining the approval of the director.

~~3.14.18.a.~~ 3.14.r.1. In connection with any such request, the permittee must file with the director an amended background investigation disclosure statement containing the necessary information about the person, including any evidence the permittee wishes to bring forth demonstrating the person's rehabilitation.

~~3.14.18.b.~~ 3.14.r.2. The director may consider whether the person has affirmatively demonstrated rehabilitation, and may consider the factors set forth in determining whether to grant permission to the permittee to employ the person or allow him or her to acquire an interest in the

permit.

~~3.14.18.e.~~ 3.14.r.3. Any permittee that violates the provisions of ~~section~~ subsection 3.14 of this rule may be subject to having its permit revoked, notwithstanding the rehabilitation of the individual in question.

~~3.14.18.d.~~ 3.14.r.4. Mitigation and Restitution.

In the case of persons convicted of violating the criminal provisions of any federal or state environmental statute, regulation, or rule, or persons convicted of any crime which involved the violation of such statutes regulations, or rules, the director will not consider such person rehabilitated unless that person has made all reasonable efforts to clean up or mitigate any environmental damage caused by the activities for which he or she was convicted, and to make restitution to any victims injured thereby.

### 3.15. Water Pollution Control Requirements.

For the purposes of leachate collection and treatment for wastewater and associated facility discharges, the wastewater facility and all appurtenances must meet the permit requirements for such treatment as set out in W. Va. Code §§22-1-1 et seq., 22-11-1 et seq., 22-12-1 et seq. and 22-15-1 et seq. and any rules promulgated thereunder. For the purposes of section subsection 3.15 of this rule only, the requirements in ~~46-CSR-2~~ 46CSR1, as amended, are hereby incorporated by reference. For landfills a single permit must be issued pursuant to ~~section~~ subdivision ~~3-5-2~~ 3.5.b of this rule.

### 3.16. Specific Application and Permitting Requirements.

~~3.16.1.~~ 3.16.a. Requirements for Landfills.

The applicant must submit all information required by this rule, as applicable, in order for an

application to constitute an administratively complete application.

~~3.16.2.~~ 3.16.b. Requirements for Incinerators.

~~3.16.2.a.~~ 3.16.b.1. General Requirements.

The applicant must submit the following information to the director in order to obtain a permit for a resource recovery, industrial, or municipal solid waste incinerator facility: Provided: That the installation, establishment or construction of a new municipal or commercial solid waste facility utilizing incineration technology for the purpose of solid waste incineration is prohibited, per W. Va. Code §22-15-19 with the single exception of pilot projects.

~~3.16.2.a.A.~~ 3.16.b.1.A. All information required under ~~sections~~ subdivisions ~~3-7-1~~ 3.7.a through ~~3-7-12~~ 3.7.l, paragraph ~~3-7-13-a.~~ 3.7.m.1 and subdivisions ~~3-7-15,~~ 3.7.16 ~~3-7-o.~~ 3.7.p. and ~~3-8-9~~ 3.8.i, subsection ~~3.9,~~ paragraphs ~~3-10-1-h~~ 3.10.a.8, and ~~3-10-1-i~~ 3.10.a.9, and subsections 3.13, 3.14, and 3.15 of this rule;

~~3.16.2.a.B.~~ 3.16.b.1.B. Detailed drawings of waste storage areas and cleanup areas showing drainage schemes;

~~3.16.2.a.C.~~ 3.16.b.1.C. Recordkeeping procedures;

~~3.16.2.a.D.~~ 3.16.b.1.D. A waste management plan describing the handling and storage of the incoming waste and the disposition of the ash and other wastes, alternative disposal options, screening procedures and handling options for screened waste, and cleanup procedures;

~~3.16.2.a.E.~~ 3.16.b.1.E. Dust control procedures;

~~3.16.2.a.F.~~ 3.16.b.1.F. A waste

characterization plan;

~~3.16.2.a.G.~~ 3.16.b.1.G. A contingency plan indicating firefighting equipment, communication procedures with community agencies, and arrangements for emergency assistance; and

~~3.16.2.a.H.~~ 3.16.b.1.H. A start-up schedule.

~~3.16.2.b.~~ 3.16.b.2. Required Permits. At a minimum, two (2) permits will be required for incinerator facilities:

~~3.16.2.b.A.~~ 3.16.b.2.A. A permit from the West Virginia Division of Environmental Protection, Office of Air Quality; and

~~3.16.2.b.B.~~ 3.16.b.2.B. A solid waste permit for solid waste storage areas and support facilities from the West Virginia Division of Environmental Protection.

~~3.16.2.c.~~ 3.16.b.3. Exemptions.

~~3.16.2.c.A.~~ 3.16.b.3.A. Except for those facilities handling special wastes as provided in ~~section~~ subsection 4.13 of this rule, incinerators having a design capacity of five hundred (500) pounds per hour or less are exempt from the permitting requirements of ~~section~~ subsection 3.16 of this rule. However, such an incinerator must be designed and operated to meet the performance standards of section 5 of this rule and with all appropriate regulations or rules of the West Virginia Office of Air Quality.

~~3.16.2.c.B.~~ 3.16.b.3.B. Incinerators burning only clean wood waste are exempt from all permitting requirements of ~~section~~ subsection 3.16 of this rule. However, such incinerators must be designed and operated to meet the performance standards of section 5 of this rule and with all appropriate regulations or rules of the West Virginia Office of Air Quality;

~~3.16.3.~~ 3.16.c. Requirements for Transfer Stations.

~~3.16.3.a.~~ 3.16.c.1. General Requirements.

The applicant must submit the following information to the director in order to obtain a permit for a transfer station:

~~3.16.3.a.A.~~ 3.16.c.1.A. All information required under ~~sections~~ subdivisions ~~3.7.1~~ 3.7.a through ~~3.7.12~~ 3.7.l, and ~~sections~~ subdivisions ~~3.7.15~~, ~~3.7.16~~, ~~3.8.1~~ 3.7.o, 3.7.p, 3.8.g, and ~~3.8.9~~ 3.8.i, subections 3.9, 3.13, 3.14, and 3.15 of this rule;

~~3.16.3.a.B.~~ 3.16.c.1.B. A description of the solid waste storage or loading areas;

~~3.16.3.a.C.~~ 3.16.c.1.C. A description of the areas of land for which a bond will be posted;

~~3.16.3.a.D.~~ 3.16.c.1.D. The location and use of buildings and related facilities which will be used in the operation; and

~~3.16.3.a.E.~~ 3.16.c.1.E. The location of scales and weigh stations to be used in the operation.

~~3.16.3.b.~~ 3.16.c.2. Operations Plan.

An application to conduct transfer station activities must include an operations plan that includes the following:

~~3.16.3.b.A.~~ 3.16.c.2.A. A narrative description of the general operating plan for the proposed facility including:

~~3.16.3.b.A.(a)~~ 3.16.c.2.A.1. The origin, composition, and weight or volume of solid waste that is proposed to be received at the facility;



~~3.16.3.b.A.(b)~~ 3.16.c.2.A.2.

The proposed operating and receiving hours for the facility;

~~3.16.3.b.A.(e)~~ 3.16.c.2.A.3.

The process to be used at the facility;

~~3.16.3.b.A.(d)~~ 3.16.c.2.A.4.

The daily operational methodology of the proposed process;

~~3.16.3.b.A.(e)~~ 3.16.c.2.A.5.

The loading rate;

~~3.16.3.b.A.(f)~~ 3.16.c.2.A.6.

The proposed capacity of the facility; and

~~3.16.3.b.A.(g)~~ 3.16.c.2.A.7.

The expected life of the facility.

~~3.16.3.b.B.~~ 3.16.c.2.B. A plan for an alternative waste handling or disposal system during periods when the proposed facility is not in operation, including procedures to be followed in case of equipment breakdown (e.g., the use of standby equipment, extension of operating hours, and contractual agreements for diversion of municipal waste to other facilities); and

~~3.16.3.b.C.~~ 3.16.c.2.C. A plan for training equipment operators and other personnel in the design and operation of the facility.

~~3.16.3.c.~~ 3.16.c.3. Plan for Access Roads.

An application to conduct transfer station activities must contain designs, cross-sections, and specifications for access roads, including load limits, in accordance with ~~section~~ subdivision 4.5-3 4.5.c of this rule.

~~3.16.3.d.~~ 3.16.c.4. Stormwater, Soil Erosion, and Sedimentation Control Plan.

An application to conduct transfer station activities must include a plan to manage surface

storm water soil erosion and sedimentation control during the various phases of construction and operation on the permit area. Calculations indicating water quantities must be based on the 25-year, 24-hour storm event. The plan must include fully dimensioned diversion ditches and indicate length, gradient, and cross-section for configuration by reach and capacities for ditch volume by reach. Calculations which are necessary to support design and siting must be included in the plan.

~~3.16.3.e.~~ 3.16.c.5. Groundwater Monitoring Plan.

If required by the director, the applicant must submit a groundwater monitoring plan to detect contamination, degradation or pollution of groundwater from the facility.

~~3.16.3.f.~~ 3.16.c.6. Soil Monitoring Plan.

If required by the director, the applicant must submit a soil monitoring plan, capable of detecting soil contamination from the facility.

~~3.16.3.g.~~ 3.16.c.7. Nuisance Control Plan.

An application to conduct transfer station activities must contain a plan to prevent hazards or nuisances from vectors, odors, noise, dust, and other nuisances not otherwise provided for in the permit application. The plan must provide for the routine assessment of vector infestation and must also provide for counter measures. The plan may include a control program involving a contractual arrangement for services with an exterminator.

~~3.16.3.h.~~ 3.16.c.8. Litter Control Plan.

An application to conduct transfer station activities must contain a plan to control litter.

~~3.16.3.i.~~ 3.16.c.9. Contingency Plan.

An application to conduct transfer station activities must contain a contingency plan relating to emergency procedures, hazard prevention, emergency equipment, and the implementation of the contingency plan.

~~3-16.4.~~ 3.16.d. Requirements for Recycling Facilities.

~~3-16.4.a.~~ 3.16.d.1. Applicability.

Recycling facilities whose only function is to accept at no charge, buy or transfer source separated recyclable material for reuse, resale or transfer for further processing are exempt from this rule. All other recycling facilities must provide notice and obtain a permit in accordance with the provisions of ~~section subdivision~~ 3-16.4 3.16.d of this rule. Provided, That mixed waste recovery facilities, sludge processing facilities, and composting facilities are not considered recycling facilities nor considered to be reusing or recycling solid waste within the meaning of W.Va. Code §22-15-2 "Recycling facility."

~~3-16.4.a.A.~~ 3.16.d.1.A. Recycling facilities existing on the effective date of this rule are considered to have a valid permit from the division if the requirements of ~~section paragraph~~ 3-16.4.b. 3.16.d.2 of this rule is met.

~~3-16.4.a.B.~~ 3.16.d.1.B. Recycling facilities which are developed after the effective date of this rule are considered to have a valid permit from the Division upon fulfilling the requirements of ~~sections paragraphs~~ 3-16.4.b 3.16.d.2 and ~~3-16.4.c~~ 3.16.d.3 of this rule.

~~3-16.4.b.~~ 3.16.d.2. Notification of Activity.

~~3-16.4.b.A.~~ 3.16.d.2.A. Existing Qualifying Recycling Facilities.

Any existing recycling facility which qualifies for a permit under ~~section~~ paragraph 3-16.4.a 3.16.d.1 of this rule must

notify the director of its existence within ninety (90) days of the effective date of this rule.

~~3-16.4.b.B.~~ 3.16.d.2.B. New Qualifying Recycling Facilities.

Any new recycling facility which qualifies for a permit under ~~section~~ paragraph 3-16.4.a 3.16.d.1 of this rule must notify the director of its existence prior to installation, establishment, construction, modification, or operation of the recycling facility.

~~3-16.4.b.C.~~ 3.16.d.2.C. Form of Notification.

Notification required by ~~section~~ paragraph 3-16.4.b 3.16.d.2 of this rule must be made to the director on forms and in the manner prescribed by the director.

~~3-16.4.c.~~ 3.16.d.3. Recycling Facility Requirements.

Except as provided under ~~section~~ paragraph 3-16.4.d 3.16.d.4 of this rule, all persons owning or operating a recycling facility must:

~~3-16.4.c.A.~~ 3.16.d.3.A. Comply with the applicable prohibitions and location standards listed under ~~section subsection~~ 3.1 of this rule;

~~3-16.4.c.B.~~ 3.16.d.3.B. Provide rapidly growing trees, shrubbery, fencing, berms, or other appropriate means at the facility to provide a wind break, screening from the surrounding area and to function as a barrier to discourage unauthorized access;

~~3-16.4.c.C.~~ 3.16.d.3.C. Post a sign in conformance with ~~section subparagraph~~ 4-6.1-a.M 4.6.a.1.M of this rule;

~~3-16.4.c.D.~~ 3.16.d.3.D. Construct

and maintain adequate shelter and sanitary facilities for all personnel;

~~3.16.4.e.E.~~ 3.16.d.3.E. Construct and maintain adequate drainage systems to prevent freestanding storm water;

~~3.16.4.e.F.~~ 3.16.d.3.F. Ensure that all leachate, waste water, and storm water is collected, treated and/or discharged in a manner that does not violate the water quality standards established under W. Va. Code §22-11-1 et seq. or the regulations and rules promulgated thereunder;

~~3.16.4.e.G.~~ 3.16.d.3.G. All operations must be conducted within enclosed structure(s);

~~3.16.4.e.H.~~ 3.16.d.3.H. Receiving or storing of any hazardous waste material at a recycling facility is strictly prohibited;

~~3.16.4.e.I.~~ 3.16.d.3.I. Storage of recyclable materials outside of the enclosed structure must only be materials in bundles, bins or containers; or materials prepared for transportation;

~~3.16.4.e.J.~~ 3.16.d.3.J. All materials not used in the recycling process must be properly disposed of;

~~3.16.4.e.K.~~ 3.16.d.3.K. No material may be stored for more than sixty (60) days without written approval by the director;

~~3.16.4.e.L.~~ 3.16.d.3.L. All materials received by the facility must be accurately weighed or otherwise measured in accordance with the provisions of ~~Title 110, Series 6A, sections 110CSR6A subsections 4.2 and 4.3 of the CSR.~~

~~3.16.4.d.~~ 3.16.d.4. Other Recycling Exemptions.

The following recycling activities are not

required to obtain a solid waste permit pursuant to this rule:

~~3.16.4.d.A.~~ 3.16.d.4.A. Nonprofit organizations accepting source-separated materials; and

~~3.16.4.d.B.~~ 3.16.d.4.B. Returnable container redemption centers operated by a dealer or distributor.

~~3.16.4.e.~~ 3.16.d.5. Resource Recovery Permitting Requirements. (Reserved)

~~3.16.4.f.~~ 3.16.d.6. Other Recycling Requirements. (Reserved)

~~3.16.5.~~ 3.16.e. Requirements for Construction/Demolition Landfills.

~~3.16.5.a.~~ 3.16.e.1. General Requirements.

All construction/demolition landfills must apply for and receive approval from the director prior to operation unless otherwise specified by ~~section subdivision 3.16.5~~ 3.16.e of this rule. Notwithstanding the provisions of ~~section subdivision 3.16.5~~ 3.16.e of this rule, a Class D solid waste facility which qualifies as a commercial solid waste facility pursuant to W. Va. Code §22-15-1 et seq. is required to meet all appropriate landfill requirements specified by this rule.

~~3.16.5.b.~~ 3.16.e.2. Exemptions. The disposal of trees, stumps, woodchips, and yard waste generated from land clearing when generation and disposal occur on the same property is exempt from the requirements of this rule. A landowner using construction/demolition waste material to improve the grade of the land if the area of that land does not exceed one-half acre is exempt from the requirements of ~~these regulations~~ this rule, provided that the landowner does not fill natural wetlands, adheres to best management practices for construction and maintains cover over the material. The

construction/demolition waste material exemption for landowners does not apply to multiple one-half acre sites on the same parcel of land.

~~3.16.5.e.~~ 3.16.e.3. Class D-1 Solid Waste Facilities. A Class D-1 solid waste/facility permit must be obtained for the disposal of construction/demolition waste in cases where a noncommercial Class D solid waste facility general permit specified by section paragraph 3.16.5.d 3.16.e.4 is not applicable.

~~3.16.5.e.A.~~ 3.16.e.3.A. Except as provided in sections parts 3.16.5.e.A.(a) 3.16.e.3.A.1 through 3.16.5.e.A.(d) 3.16.e.3.A.4 of this rule, an applicant for a Class D-1 solid waste facility permit must meet all of the requirements in section 3 of this rule.

~~3.16.5.e.A.(a)~~ 3.16.e.3.A.1. In lieu of the test corings required in section subdivision 3.8.3 3.8.c of this rule, available literature and field reconnaissance may be used to obtain the information required in section subdivision 3.8.3 3.8.c of this rule.

~~3.16.5.e.A.(b)~~ 3.16.e.3.A.2. A minimum of one (1) downgradient monitoring well must be drilled to intersect the uppermost significant aquifer. If the permit area is between five (5) to ten (10) acres, a minimum of two (2) downgradient monitoring wells must be drilled. If the permit area is greater than ten (10) acres, a minimum of three (3) monitoring wells must be drilled.

~~3.16.5.e.A.(e)~~ 3.16.e.3.A.3. Class D-1 solid waste facilities are exempted from the requirements of section subparagraph 3.8.4.d.A, 3.8.d.4.A and parts 3.8.3.a.C.(d) 3.8.c.1.C.4, and 3.8.3.a.C.(i) 3.8.c.1.C.9 of this rule.

~~3.16.5.e.A.(d)~~ 3.16.e.3.A.4. Upon written request, the director may exempt a Class D-1 solid waste facility from compliance with a specific requirement in section 3 of this

rule that the director deems to be inappropriate or may modify such requirement for that particular facility.

~~3.16.5.d.~~ 3.16.e.4. Class D General Permit.

~~3.16.5.d.A.~~ 3.16.e.4.A. Coverage.

The director may issue a general permit to regulate noncommercial construction/demolition solid waste facilities except those covered by individual Class D permits.

~~3.16.5.d.B.~~ 3.16.e.4.B. Administration.

General permits may be modified, revoked, reissued or suspended in accordance with the applicable requirements of section subsection 3.18 of this series rule.

~~3.16.5.d.B.(a)~~ 3.16.e.4.B.1. The director may require any person authorized by a general permit to apply for an individual permit. Any interested person may petition the director to take action under this section part. Cases where an individual permit may be required include the following:

~~3.16.5.d.B.(a)(A)~~ 3.16.e.4.B.1.(a) The permittee is not in compliance with the conditions of the general permit;

~~3.16.5.d.B.(a)(B)~~ 3.16.e.4.B.1.(b) A change has occurred in the availability of the best management practices or demonstrated technology for the control or abatement of problems applicable to the facility;

~~3.16.5.d.B.(a)(C)~~ 3.16.e.4.B.1.(c) Specific regulations or rules are promulgated for solid waste facilities covered by the general permit.

~~3.16.5.d.B.(b)~~ 3.16.e.4.B.2.

The director may require any owner or operator authorized by a general permit to apply for an individual permit as provided in ~~paragraph part~~ 3.16.5.d.B.(a) 3.16.e.4.B.1 of this ~~section part~~, only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of reasons for this decision, an application form, a statement setting a time for the owner or operator to file the application, and a statement that on the effective date of the individual permit, the general permit as it applies to the individual permittee shall automatically terminate. The director may grant additional time upon request of the applicant.

~~3.16.5.d.B.(e)~~ 3.16.e.4.B.3.

Any owner or operator authorized by a general permit may request to be excluded from the coverage of a general permit by applying for an individual permit. The owner or operator shall submit an application under ~~section subsection~~ 3.5 with reasons supporting the request, to the director, no later than ninety (90) days after the general permit notice in accordance with ~~section subsection~~ 3.21.

~~3.16.5.d.B.(d)~~ 3.16.e.4.B.4.

Upon issuance of a general permit, the director shall cause to be published a notice of issuance as a Class I legal advertisement in a qualified daily or weekly newspaper and by any other means reasonably calculated to give notice of issuance to the persons affected by it.

### 3.17. Draft Permit.

~~3.17.1:~~ 3.17.a. Once an application is complete, the director must tentatively decide whether to prepare a draft permit or to deny the application.

~~3.17.1.a:~~ 3.17.a.1. If the director tentatively decides to issue a general permit, he or she shall prepare a draft general permit that shall contain the following information:

~~3.17.1.a.A:~~ 3.17.a.1.A. All

conditions under ~~sections subsections~~ 3.5 and 3.6 and ~~section subdivision~~ 5.4.3 5.4.c;

~~3.17.1.a.B:~~ 3.17.a.1.B. Permit application requirements;

~~3.17.1.a.C:~~ 3.17.a.1.C. All compliance schedules;

~~3.17.1.a.D:~~ 3.17.a.1.D. All limitations, standards, prohibitions and conditions, and all variances that are to be included.

~~3.17.2:~~ 3.17.b. If the director decides to prepare a draft permit, a draft permit must be prepared that contains the following information:

~~3.17.2.a:~~ 3.17.b.1. All conditions required under ~~section~~ 3 and other applicable sections of this rule.

~~3.17.2.b:~~ 3.17.b.2. All compliance schedules; and

~~3.17.2.c:~~ 3.17.b.3. Standards for treatment, storage, and disposal and other permit conditions under ~~section~~ 4 and/or 5 of this rule.

~~3.17.3:~~ 3.17.c. A fact sheet will be prepared by the director for every draft permit for each solid waste facility or activity and for every general permit. The fact sheet must briefly set forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The director will send this fact sheet to the applicant and, upon request, to any other person.

~~3.17.4:~~ 3.17.d. The fact sheet must include, when applicable:

~~3.17.4.a:~~ 3.17.d.1. A brief description of the type of facility or activity which is the subject of the draft permit.

~~3.17.4.b:~~ 3.17.d.2. The type and

quantity of wastes which are proposed to be or are being recycled, treated, stored, or disposed of, injected, emitted, or discharged. A description of the type of wastes must include, but not be limited to, the characteristics of the waste materials and the potential effects upon public health and the environment.

~~3.17.4.e.~~ 3.17.d.3. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions.

~~3.17.4.d.~~ 3.17.d.4. A rationale explaining why any requested variances or alternatives to required standards do or do not appear justified.

~~3.17.4.e.~~ 3.17.d.5. A description of the procedures for reaching a final decision on the draft permit including:

~~3.17.4.e.A.~~ 3.17.d.5.A. The beginning and ending dates of the comment period and the address where comments will be received;

~~3.17.4.e.B.~~ 3.17.d.5.B. The procedures for requesting a hearing and the nature of that hearing; and

~~3.17.4.e.C.~~ 3.17.d.5.C. Any other procedures by which the public may participate in the final decision.

~~3.17.4.f.~~ 3.17.d.6. The name and telephone number of a person to contact for additional information.

3.18. Permit Modification, Reissuance, Suspension, and Revocation.

~~3.18.1.~~ 3.18.a. Actions by the Director.

~~3.18.1.a.~~ 3.18.a.1. Permits may be modified, revoked, reissued, suspended, or revoked by the director for the reasons specified

in ~~section~~ subsection 3.18 of this rule.

~~3.18.1.a.A.~~ 3.18.a.1.A. When a permit is modified, only the conditions subject to modification are reopened. All other conditions of the permit will remain in effect for the duration of the permit.

~~3.18.1.a.B.~~ 3.18.a.1.B. The director may require additional information and, in the case of a major modification, may require submission of a new permit application.

~~3.18.1.b.~~ 3.18.a.2. If the director tentatively decides to modify a permit, the director will prepare a modified draft permit and will follow the public notice procedures in ~~section~~ subsection 3.21 of this rule. The director may request additional information or require the submission of an updated permit application from the applicant.

~~3.18.2.~~ 3.18.b. Causes for Modification or Permittee-Requested Reissuance of Permits.

~~3.18.2.a.~~ 3.18.b.1. Minor Modification.

Permits may be modified by the director at any time except for major modifications as listed in ~~section~~ paragraph ~~3.18.2.b~~ 3.18.b.2 of this rule. Minor modification does not require the preparation of a draft permit or the completion of the public notice procedures.

~~3.18.2.a.A.~~ 3.18.b.1.A. A minor modification may be approved by the director for a permittee proposing to increase the volume of solid waste accepted at the facility by an amount of ten percent (10%) or less upon application in alternate years, unless such an increase requires a change in the classification of the facility.

~~3.18.2.b.~~ 3.18.b.2. Major Modifications.

The following are causes for major



modification, but not reissuance, of a permit unless the permittee so requests or agrees. These causes require the preparation of a draft permit and public notice and the opportunity for a public hearing as required by this rule unless an emergency is declared by the director.

~~3.18.2.b.A.~~ 3.18.b.2.A. The areal limits of the waste disposal unit will be increased over the permitted disposal area;

~~3.18.2.b.B.~~ 3.18.b.2.B. The performance, efficiency, or longevity of the liner system or the final cover (cap) will be decreased;

~~3.18.2.b.C.~~ 3.18.b.2.C. The efficiency or performance of the leachate management system will be decreased;

~~3.18.2.b.D.~~ 3.18.b.2.D. The efficiency or performance of a gas management system will be decreased;

~~3.18.2.b.E.~~ 3.18.b.2.E. The performance or operation of the surface water control system will be negatively affected;

~~3.18.2.b.F.~~ 3.18.b.2.F. A decrease in the quality or quantity of data from any environmental monitoring system will occur;

~~3.18.2.b.G.~~ 3.18.b.2.G. A change in the design or configuration of the regraded area will occur;

~~3.18.2.b.H.~~ 3.18.b.2.H. The amount or type of post-closure financial assurance will change;

~~3.18.2.b.I.~~ 3.18.b.2.I. The permitted disposal area boundary will be significantly changed;

~~3.18.2.b.J.~~ 3.18.b.2.J. The post-closure land use of the property will change;

~~3.18.2.b.K.~~ 3.18.b.2.K. A

remedial action to protect groundwater is necessary;

~~3.18.2.b.L.~~ 3.18.b.2.L. The permit is to be transferred to a new permittee;

~~3.18.2.b.M.~~ 3.18.b.2.M. Operating authorization is being sought to place into service a structure constructed pursuant to a construction Q.A./Q.C. program; or

~~3.18.2.b.N.~~ 3.18.b.2.N. Other similar modifications as determined by the director.

~~3.18.3.~~ 3.18.c. Permit Suspension or Revocation.

~~3.18.3.a.~~ 3.18.c.1. Suspension.

A solid waste facility permit may be suspended by order of the director for any of the following reasons:

~~3.18.3.a.A.~~ 3.18.c.1.A. Violation of the Act, this rule or any order of the director issued thereunder;

~~3.18.3.a.B.~~ 3.18.c.1.B. Interference with a representative of the director in the performance of the director's duties;

~~3.18.3.a.C.~~ 3.18.c.1.C. Failure to adhere to the terms and conditions of the permit or any order issued by the director under this rule the Act; or

~~3.18.3.a.D.~~ 3.18.c.1.D. Discovery of failure in the application or during the permit issuance process to fully disclose all significant facts or the permittee's misrepresentation of any significant fact at any time.

~~3.18.3.b.~~ 3.18.c.2. Revocation. A solid waste facility permit may be revoked by order of the director for any of the following reasons:



~~3.18.3.b.A.~~ 3.18.c.2.A. Any deficiency at the solid waste facility constituting an imminent pollution, health, or safety hazard;

~~3.18.3.b.B.~~ 3.18.c.2.B. Persistent violation of this rule, permit terms and conditions, or orders issued by the director under the Act or this rule;

~~3.18.3.b.C.~~ 3.18.c.2.C. Discovery of failure in the application or during the permit issuance process to fully disclose all significant facts or the permittee's misrepresentation of any significant fact at any time; or

~~3.18.3.b.D.~~ 3.18.c.2.D. Any cause which would require disqualification pursuant to this rule from receiving a permit upon original application.

~~3.18.3.c.~~ 3.18.c.3. Effect of Permit Suspension or Revocation.

~~3.18.3.c.A.~~ 3.18.c.3.A. Suspension.

All solid waste processing, recycling, or disposal activities and the receipt of any solid waste at the solid waste facility must cease immediately upon receipt of an order of suspension. Activities at the facility may recommence only after expiration of the order of suspension or upon revocation of that order by the issuing authority.

~~3.18.3.c.B.~~ 3.18.c.3.B. Revocation.

All solid waste processing, recycling, or disposal activities and the receipt of any solid waste at the solid waste facility must cease immediately upon receipt of an order of revocation. The solid waste facility owner must submit either an application for a permit to close the facility or an application for new solid waste facility permit within the time specified in the order of revocation.

~~3.18.3.c.C.~~ 3.18.c.3.C. Environmental Monitoring and Control.

Environmental monitoring and control activities specified in an order of suspension or in an order of revocation must continue at the solid waste facility for the duration of such order or until the authority who issued that order approves the cessation of such activities.

### 3.19. Transfer of Permit.

#### ~~3.19.1.~~ 3.19.a. Transfer Requirements

A permit issued by the director in accordance with the provisions of this rule may be transferred to another person. The person seeking to succeed to the rights granted by the permit must:

~~3.19.1.a.~~ 3.19.a.1. File a completed application with the director on forms and in a manner prescribed by the director, including background investigation disclosure statements as required by ~~section~~ subsection 3.14 of this rule;

~~3.19.1.b.~~ 3.19.a.2. Provide performance bond coverage at least equal to that of the original permit in accordance with ~~section~~ subsection 3.13 of this rule. It must be affirmatively demonstrated to the director that a bond in the full amount of that required for the permit will be kept in full force and effect before, during, and after the transfer of the permit rights;

~~3.19.1.c.~~ 3.19.a.3. Provide for public notice in accordance with ~~section~~ subsection 3.21 of this rule; and

~~3.19.1.d.~~ 3.19.a.4. Obtain the director's approval for the transfer of permit in writing.

#### ~~3.19.2.~~ 3.19.b. Denial of Transfer.

The director may refuse to transfer any permit and require that a new application for a solid waste facility permit be submitted prior to any

transfer of permit responsibility or rights. Such refusal must be made in writing giving reasons therefor.

### ~~3.19.3.~~ 3.19.c. Operator Assignment.

A permittee who wishes to assign the operation of the solid waste facility through an agreement, contract, or other legal instrument, to another party but retain the permit must request prior written approval on forms prescribed by the director. Such party must complete background investigation disclosure statement(s) as required under section subsection 3.14 of this rule.

## 3.20. Permit Renewal.

### ~~3.20.1.~~ 3.20.a. Application for Permit Renewal.

An application for the renewal of a valid permit that proposes no major modification to the permit must be on forms prescribed by the director and must contain the following:

~~3.20.1.a.~~ 3.20.a.1. The name and address of the permittee, location of the permit area including the county, and the permit number;

~~3.20.1.b.~~ 3.20.a.2. A statement that the terms and conditions of the permit are being satisfactorily met;

~~3.20.1.c.~~ 3.20.a.3. A statement that the operation is in compliance with the applicable environmental protection standards of the Act and all applicable rules and regulations;

~~3.20.1.d.~~ 3.20.a.4. A statement that the performance bond or other financial assurance for the operation will continue in effect.

~~3.20.1.e.~~ 3.20.a.5. A progress map of the same size and scale as the proposal map;

~~3.20.1.f.~~ 3.20.a.6. A certification that the information set forth in the form and progress

map is true, accurate, and complete; and

~~3.20.1.g.~~ 3.20.a.7. A notarized signature of the principal officer of the permittee in accordance with section subdivision ~~3.7.18~~ 3.7.f of this rule.

### ~~3.20.2.~~ 3.20.b. Public Notice.

An applicant seeking to renew a valid permit who does not propose any major modification to that permit must meet the public notice requirements of section subsection 3.21 of this rule. The Division will receive comments only upon the contents of the application for renewal. A public hearing may be held at the discretion of the director.

### ~~3.20.3.~~ 3.20.c. Modification and Renewal.

If an application is received which proposes a major modification to the existing permit and the renewal of that permit, it will be treated as a major modification pursuant to section paragraph ~~3.18.2.b~~ 3.18.b.2 of this rule in addition to the requirements of section subsection 3.20 of this rule.

## 3.21. Public Notice.

### ~~3.21.1.~~ 3.21.a. Scope.

~~3.21.1.a.~~ 3.21.a.1. Public notice must be given whenever either of the following actions have occurred:

~~3.21.1.a.A.~~ 3.21.a.1.A. A draft permit has been prepared; or

~~3.21.1.a.B.~~ 3.21.a.1.B. A hearing has been scheduled under section subsection 3.23 of this rule.

### ~~3.21.2.~~ 3.21.b. Timing.

~~3.21.2.a.~~ 3.21.b.1. Public notice of

the preparation of a draft permit must allow at least thirty (30) days for public comment. Upon request of the permittee, the public comment period will be extended for an additional thirty (30) days. Further extension of the comment period may be granted by the director for good cause shown but in no case may the further extension exceed an additional thirty (30) days.

~~3-21-2-b:~~ 3.21.b.2. Public notice of a public hearing must be given at least thirty (30) days before the hearing. Public notice of the hearing may be given at the same time as public notice of the draft permit and the two (2) notices may be combined.

~~3-21-2-e:~~ 3.21.b.3. A notice required under ~~section~~ subsection 3.21 of this rule may be combined with that notice required under W. Va. Code §22-11-1 et seq.

~~3-21-3:~~ 3.21.c. Methods.

Public notice must be given by the following methods:

~~3-21-3-a:~~ 3.21.c.1. By mailing a copy of a notice to those persons whose names are included on a mailing list maintained by the Division.

~~3-21-3-b:~~ 3.21.c.2. By the director publishing the public notice as a Class II legal advertisement in a qualified newspaper, as defined in W. Va. Code §59-3-1-1 et seq., serving the county, or counties where the facility will be located. The director may also require that legal advertisement be placed in newspapers of adjacent counties. The cost of the publication will be borne by the applicant who must send a certification of publication to the Division within twenty (20) days after publication.

~~3-21-3-e:~~ 3.21.c.3. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any

other forum or medium to elicit public participation.

~~3-21-4:~~ 3.21.d. Contents.

~~3-21-4-a:~~ 3.21.d.1. Public Notice Contents.

All public notices issued under ~~section~~ subsection 3.21 of this rule must contain the following information:

~~3-21-4-a-A:~~ 3.21.d.1.A. The name and address of the Office processing the permit action for which notice is being given;

~~3-21-4-a-B:~~ 3.21.d.1.B. The name and address of the permittee or permit applicant, and if different, of the facility or activity regulated by the permit, except in the case of general permits;

~~3-21-4-a-C:~~ 3.21.d.1.C. A brief description of the business conducted at the facility or activity described in the permit application or in the draft permit, when there is no application;

~~3-21-4-a-D:~~ 3.21.d.1.D. The name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit and the application;

~~3-21-4-a-E:~~ 3.21.d.1.E. A brief description of the comment procedures required by ~~section~~ subdivision ~~3-21-2~~ 3.21.b of this rule and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision;

~~3-21-4-a-F:~~ 3.21.d.1.F. A general description of the location of the proposed permit area including streams;

~~3.21.4.a.G.~~ 3.21.d.1.G. A clear and accurate location map. A map of a scale and detail found in the West Virginia General Highway Map will be the minimum standard for acceptance. The map size must be at a minimum two inches by two inches (2" x 2"). Longitude and latitude lines and a north arrow must be shown on the map and such lines will cross at or near the center of the proposed permit area; and

~~3.21.4.a.H.~~ 3.21.d.1.H. A description of the activities covered in the application, including the class of the solid waste facility, the types, amounts, and origins of solid wastes to be handled, site improvements, and solid waste handling methods.

~~3.21.4.b.~~ 3.21.d.2. Other Public Notice Information.

In addition to the contents required under ~~section paragraph 3.21.4.a~~ 3.21.d.1 of this rule, public notices for hearings must contain the following information:

~~3.21.4.b.A.~~ 3.21.d.2.A. A reference to the date of previous public notices relating to the permit;

~~3.21.4.b.B.~~ 3.21.d.2.B. The date, time, and place of the hearing; and

~~3.21.4.b.C.~~ 3.21.d.2.C. A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

3.22. Public Comments and Requests for Public Hearings.

~~3.22.1.~~ 3.22.a. During the public comment period provided under ~~section subdivision 3.21.2~~ 3.21.b of this rule, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for a public hearing must be

in writing and must state the nature of the issues proposed to be raised in the hearing. All comments must be considered in making the final decision and must be answered as provided in ~~section subsection~~ 3.27 of this rule.

3.23. Public Hearings.

~~3.23.1.~~ 3.23.a. The director will hold a public hearing in the vicinity of the proposed facility whenever the director finds, on the basis of requests, a significant degree of public interest on issues relevant to the draft permit. The director also may hold a public hearing at his or her discretion whenever such a hearing might clarify one or more issues involved in the permit decision.

~~3.23.2.~~ 3.23.b. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing will automatically be extended to ten (10) days after the close of any public hearings under ~~section subsection~~ 3.23 of this rule.

~~3.23.3.~~ 3.23.c. A tape recording or written transcript of the hearing will be made available to the public, upon request.

3.24. Reopening of the Public Comment Period.

~~3.24.1.~~ 3.24.a. If any data, information, or arguments submitted during the public comment period raise substantial new questions concerning a permit, or if as a result of comments submitted by someone other than the permittee, or the director determines to revise any condition of the permit that had been sent to initial public notice, the director must take one or more of the following actions:

~~3.24.1.a.~~ 3.24.a.1. Prepare a new draft permit.

~~3.24.1.b.~~ 3.24.a.2. Reopen or extend the public comment period to give interested persons an opportunity to comment on the information or arguments submitted.

~~3.24.4.e.~~ 3.24.a.3 Conduct a public hearing.

~~3.24.2.~~ 3.24.b. Comments filed during the reopened comment period will be limited to the substantial new questions that caused its reopening. The public notice must define the scope of the reopening.

### 3.25. Public Participation File.

The applicant for a permit for a solid waste facility, major modification, or closure must maintain a public participation file. The file must contain all written comments received during the public comment period, copies or tapes of transcripts of all meetings held by the applicant in response to any public comment, and a copy of the applicant's written response to all written comment letters received during the public comment period. These response letters must clearly address each point in each comment letter including any actions taken by the applicant to address the comment. The response letters must be sent by certified mail and the signed return receipts must also be included in the public participation file. The complete public participation file must be submitted to the director by the applicant, within thirty (30) days of the end of the public comment period designed in the public notice. The director must approve the public participation file prior to permit issuance.

### 3.26. Public Availability of Information.

Public availability of information relating to facility permits shall be governed by the provisions of W. Va. Code §29B-1-1 et seq.

### 3.27. Issuance and Effective Date of Permit.

~~3.27.1.~~ 3.27.a. After the close of the

public comment period on a draft permit, the director must issue a final permit decision. The director must provide written notification of the decision to the applicant and to each person requesting notice of the final permit decision. For the purposes of ~~section~~ subsection 3.27 of this rule, a "final permit decision" means the final decision of the director to issue, deny, modify, suspend, revoke, reissue, or terminate a permit.

~~3.27.2.~~ 3.27.b. If the final permit decision is to deny, suspend, revoke, modify, or terminate a permit, the director must provide the reasons therefor in the director's written notification to the applicant. This notification will also include reference to the procedures for appealing the final permit decision.

~~3.27.3.~~ 3.27.c. A final permit decision becomes effective not less than thirty (30) days after the date of notice of the decision, unless an earlier date is requested by the applicant and agreed upon by the director.

### 3.28. Permit Review by the Director.

~~3.28.1.~~ 3.28.a. The director may refuse to grant a permit in accordance with the provisions of W. Va. Code §22-15-5(c). Written notification of such a refusal, and the reasons therefor, will be provided to the applicant.

~~3.28.2.~~ 3.28.b. Within thirty (30) days of receipt of a permit application, compliance schedule, closure plan, or major modification application, the director will determine whether such application, schedule, or plan is complete (i.e., in proper order for technical review to commence) and will notify the applicant of the determination in writing. If the director determines that such application, schedule, or plan is not complete, the notification will advise the applicant of the deficiencies that require remedy.

### 3.29. Appeals.

Appeal of permit decisions must be conducted

in accordance with the provisions of W. Va. Code §22-15-16.

**~~§47-38-4.~~ §33-1-4. Landfill Performance Standards.**

**4.1. Enforcement of Landfill Performance Standards.**

Enforcement of the performance standards in section 4 of this rule must be conducted in accordance with the provisions of W. Va. Code §22-15-1 et seq.

**4.2. Solid Waste Assessment Fees.**

Permittees are required under the provisions of W. Va. Code §22-15-11 and ~~110-CSR-6A~~ 110CSR6A of the W. Va. Department of Tax and Revenue to pay solid waste assessment fees.

**4.3. Landfill Manager Training and Certification.**

~~4.3.1.~~ 4.3.a. Qualifications.

Operation of every commercial solid waste disposal facility "landfill," must be conducted under the direction of an individual who has authority and knowledge to make and implement decisions regarding operating conditions at the facility (called in this ~~subsection~~ subdivision an "individual in responsible charge") and who has attended and successfully completed a course of instruction in solid waste management procedures and practices. Such course of instruction must be approved in writing by the director.

~~4.3.2.~~ 4.3.b. Applicability.

Individuals in responsible charge of existing or new landfills and new individuals in responsible charge of existing landfills must attend and successfully complete a course of instruction within twelve (12) months from the effective date of this rule.

~~4.3.3.~~ 4.3.c. Instruction Course Criteria.

An approved course of instruction must include at a minimum, the role of sanitary landfills in integrated solid waste management, basics of site selection, complying with design requirements, waste acceptance and screening, leachate management, landfill gas management, landfill operational techniques, environmental/operational and permit compliance inspections, field exercise and homework assignment, landfill economics, closure and post-closure care, state/federal regulations, permitting requirements and a written examination sanctioned by an internationally recognized certification organization or an accredited college or university program.

~~4.3.4.~~ 4.3.d. Certificate Requirement.

Successful completion of an approved course of instruction by an individual in responsible charge must include passing the written examination and the award of a certificate as a certified manager; and

~~4.3.4.a.~~ 4.3.d.1. The individual must demonstrate that he or she has remained current in the field of solid waste management by attending at least thirty (30) contact hours of continuing education every three years and providing proof thereof upon request.

**4.4. Operating Record.**

Every facility must develop and maintain, on site, or at an alternative location approved by the director an operating record that contains the information listed in this ~~section~~ subsection as it becomes available. Existing facilities must develop such a manual within ninety (90) days of the effective date of this rule, unless granted a written extension of preparation time by the director. New facilities must have a record in place on the first day of business operations. The record must include a table of contents which outlines, by section, title and page number, the



discussion required by this rule.

~~4.4.1.~~ 4.4.a. General Information.

The items listed in this ~~section~~ subdivision may be waived if those items are included in the facility permit, renewals, modifications and other similar permit documents or application thereto, provided that the permit and/or application must be kept in the operating record file including:

~~4.4.1.a.~~ 4.4.a.1. The facility title;

~~4.4.1.b.~~ 4.4.a.2. The engineering consultants;

~~4.4.1.c.~~ 4.4.a.3. The name and address of the facility owner and the name of the facility operator, the permit holder or permittee;

~~4.4.1.d.~~ 4.4.a.4. The location of the facility by latitude and longitude and county;

~~4.4.1.e.~~ 4.4.a.5. The proposed area of waste fill;

~~4.4.1.f.~~ 4.4.a.6. The anticipated life of the facility and its disposal capacity;

~~4.4.1.g.~~ 4.4.a.7. The waste contributors, including all municipalities and major commercial and industrial customers;

~~4.4.1.h.~~ 4.4.a.8. The waste type and quantity and origin to be disposed; and

~~4.4.1.i.~~ 4.4.a.9. Any exemptions requested from the Division.

~~4.4.2.~~ 4.4.b. Monitoring.

The record must include a description of required groundwater, surface water, gas, unsaturated zone, and leachate monitoring programs developed in accordance with the approved Q.A./Q.C. plan and the provisions of ~~section~~ subsection 4.4 of this rule, including:

~~4.4.3.~~ 4.4.c. Operations.

The record must describe the daily operations of the facility including a discussion of the following items:

~~4.4.3.a.~~ 4.4.c.1. The timetable for the phases of facility development;

~~4.4.3.b.~~ 4.4.c.2. The waste types accepted or excluded;

~~4.4.3.c.~~ 4.4.c.3. Typical waste handling techniques, and methods for handling unusual waste types;

~~4.4.3.d.~~ 4.4.c.4. Procedures for excluding the receipt of hazardous waste;

~~4.4.3.e.~~ 4.4.c.5. The hours of operation;

~~4.4.3.f.~~ 4.4.c.6. Traffic routing;

~~4.4.3.g.~~ 4.4.c.7. Drainage and erosion controls;

~~4.4.3.h.~~ 4.4.c.8. Windy, wet, and cold weather disposal operations;

~~4.4.3.i.~~ 4.4.c.9. Fire protection equipment;

~~4.4.3.j.~~ 4.4.c.10. Anticipated staffing requirements;

~~4.4.3.k.~~ 4.4.c.11. Methods for disease vector, dust, and odor control;

~~4.4.3.l.~~ 4.4.c.12. Daily clean-up;

~~4.4.3.m.~~ 4.4.c.13. Direction of filling;

~~4.4.3.n.~~ 4.4.c.14. Salvaging;

~~4.4.3.o.~~ 4.4.c.15. Recordkeeping and reporting requirements as follows:



~~4.4.3.o.A.~~ 4.4.c.15.A. The permittee must record, retain and maintain copies of the documents listed in this ~~section~~ subparagraph in the facility operating record, and all information contained in the operating record must be furnished upon request to the director or be made available at all reasonable times for inspection by the director. Those documents include, but are not limited to the following:

~~4.4.3.o.A.(a)~~ 4.4.c.15.A.1. Any location standard demonstrations required by ~~sections~~ subsections 3.1 and 3.2 of this rule;

~~4.4.3.o.A.(b)~~ 4.4.c.15.A.2. A listing of any inspection records, training procedures, and notification procedures required by ~~section~~ subparagraph ~~4.6.1.a.F~~ 4.6.a.1.F of this rule;

~~4.4.3.o.A.(e)~~ 4.4.c.15.A.3. Gas Monitoring results from monitoring and any remediation plans developed in accordance with ~~section~~ subsection 4.10 of this rule;

~~4.4.3.o.A.(d)~~ 4.4.c.15.A.4. Design documentation for the placement of leachate or gas condensate in the SWLF as required by ~~section~~ subdivision ~~4.13.3~~ 4.13.c of this rule;

~~4.4.3.o.A.(e)~~ 4.4.c.15.A.5. Any demonstration, certification, finding, monitoring, testing, or analytical data required by ~~section~~ subsection 4.11 of this rule;

~~4.4.3.o.A.(f)~~ 4.4.c.15.A.6. Any closure and post-closure care plans and any monitoring, testing or analytical data as required by ~~sections~~ subsection 4.11 and/or section 6 of this rule.

~~4.4.3.o.A.(g)~~ 4.4.c.15.A.7. Any cost estimates and financial assurance documentation required by ~~sections~~ subdivision ~~3.7.10~~ 3.7.j and subsection 3.13 of this rule,

~~4.4.3.o.A.(h)~~ 4.4.c.15.A.8. Any other demonstration, certification, finding, monitoring, testing, or analytical data required by this rule;

~~4.4.3.o.B.~~ 4.4.c.15.B. Alternative Recordkeeping.

~~4.4.3.o.B.(a)~~ 4.4.c.15.B.1. The director can set alternative schedules for recordkeeping and notification requirements as specified in ~~sections~~ subdivisions ~~4.4.3~~ 4.4.c and ~~4.5.4.~~ 4.5.d., except for the notification requirements in ~~sections~~ paragraph ~~3.2.7.b~~ 3.2.g.2 and subparagraph ~~4.11.3.g.A.~~ 4.11.3.g.A. *Pg 76*

~~4.4.3.p.~~ 4.4.c.16. Parking for visitors, users, and employees;

~~4.4.3.q.~~ 4.4.c.17. A listing of the backup equipment available; and

~~4.4.3.r.~~ 4.4.c.18. A listing of local emergency response personnel.

~~4.4.4.~~ 4.4.d. Design.

A general discussion of the design of the major engineering features, such as base grade configuration and relationships to subsurface conditions, anticipated waste types and characteristics, phases of development, traffic routing, liner design, facility monitoring, final capping, closure, long-term post-closure care and other similar design features.

~~4.4.5.~~ 4.4.e. Appendix.

An appendix must be included which lists the references used and includes any additional data not previously presented, supplemental design calculations, material specifications, operating agreements such as draft leachate treatment agreements or signed soil borrow agreements, documents related to long-term post-closure care funding, and other appropriate information.

#### 4.5. Minimum Design Criteria for Landfills.

##### ~~4.5.1:~~ 4.5.a. Design Capacity.

The minimum design capacity of a landfill must equal or exceed the expected volume of solid waste and daily and intermediate cover that will be disposed of at the facility within ten (10) years after operations begin. Expansions of existing facilities are not subject to the ten-year minimum design capacity requirement.

##### ~~4.5.2:~~ 4.5.b. Drainage and Sediment Control Plan.

##### ~~4.5.2.a:~~ 4.5.b.1. Stream Channel Diversions.

##### ~~4.5.2.a.A:~~ 4.5.b.1.A. Design Capacity.

~~4.5.2.a.A.(a)~~ 4.5.b.1.A.1. The design capacity of channels for temporary and permanent channel diversions must be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream of the diversion.

~~4.5.2.a.A.(b)~~ 4.5.b.1.A.2. The temporary and permanent channel diversions must be designed so that the combination of channel, bank, and floodplain configuration is adequate to pass safely the peak runoff of a 10-year, 24-hour storm for a temporary channel diversion and a 100-year, 24-hour storm for a permanent channel diversion.

##### ~~4.5.2.a.B:~~ 4.5.b.1.B. Removal of Temporary Diversions.

Temporary channel diversions must be removed when they are no longer needed to achieve the purpose for which they were approved as long as downstream facilities which were being protected are modified or removed.

##### ~~4.5.2.a.C:~~ 4.5.b.1.C. Stream

#### Channel Specifications.

The drainage and sediment control plan must contain the following plans, design data, and specifications concerning stream channels:

~~4.5.2.a.C.(a)~~ 4.5.b.1.C.1. A "stream channel design computation sheet" to be completed for each proposed temporary or permanent stream channel diversion;

~~4.5.2.a.C.(b)~~ 4.5.b.1.C.2. Construction plans showing:

~~4.5.2.a.C.(b)(A)~~ 4.5.b.1.C.2.(a) A plan view of the area showing centerline profiles of existing stream channel and proposed location of the temporary or permanent stream channel (drawn to scale);

~~4.5.2.a.C.(b)(B)~~ 4.5.b.1.C.2.(b) Profiles along the centerline of the existing and temporary or permanent stream channel showing original ground, proposed and existing stream bottom (drawn to scale);

~~4.5.2.a.C.(b)(C)~~ 4.5.b.1.C.2.(c) A cross-section showing original ground limits, bottom width, side slopes, depth of flow, floodplain configuration; and

~~4.5.2.a.C.(b)(D)~~ 4.5.b.1.C.2.(d) A detailed sequence of the installation of temporary or permanent stream channel diversions;

~~4.5.2.a.C.(e)~~ 4.5.b.1.C.3. Construction specifications; and

~~4.5.2.a.C.(d)~~ 4.5.b.1.C.4. Maintenance schedule and procedures for maintenance.

##### ~~4.5.2.b:~~ 4.5.b.2. Diversions.

~~4.5.2.b.A:~~ 4.5.b.2.A. Run-on Control System.

~~4.5.2.b.A.(a)~~ 4.5.b.2.A.1.

Permittees of all SWLFs must design, construct, operate, and maintain:

~~4.5.2.b.A.(b)~~ 4.5.b.2.A.2.

A run-on control system capable of preventing flow onto any part of the disposal area including the active portion of the SWLF during peak discharge from at least a 25-year, 24-hour storm.

~~4.5.2.b.B.~~ 4.5.b.2.B. Design

Capacity.

Diversions must have the capacity to pass safely the peak discharge from the contributing watersheds from a 25-year, 24-hour storm.

~~4.5.2.b.C.~~ 4.5.b.2.C. Diversion

Specifications.

The drainage and sediment control plan must contain the following plans, design data, and specifications concerning diversions:

~~4.5.2.b.C.(a)~~ 4.5.b.2.C.1.

A "Diversion Design Computation Sheet" must be completed for each proposed diversion;

~~4.5.2.b.C.(b)~~ 4.5.b.2.C.2.

Construction plans showing:

~~4.5.2.b.C.(b)(A)~~

4.5.b.2.C.2.(a) A profile based upon survey along the centerline of the diversion showing original ground line and proposed diversion bottom;

~~4.5.2.b.C.(b)(B)~~

4.5.b.2.C.2.(b) A channel cross-section showing the original ground line, bottom width, side slopes, depth of flow, freeboard, and other pertinent information drawn to scale;

~~4.5.2.b.C.(b)(C)~~

4.5.b.2.C.2.(c) The type of soil in which the diversion will be excavated. Either the soil must be sampled and classified at intervals of five hundred (500) feet or a demonstration of erosion

potential based on existing soils information must be made; and

~~4.5.2.b.C.(b)(D)~~

4.5.b.2.C.2.(d) The type and design of the outlet proposed for each diversion;

~~4.5.2.b.C.(e)~~ 4.5.b.2.C.3.

Maintenance schedule and procedures for maintenance; and

~~4.5.2.b.C.(d)~~ 4.5.b.2.C.4.

Construction and vegetation specifications.

~~4.5.2.e.~~ 4.5.b.3. Sediment Control.

Sediment control structures must be constructed in appropriate locations in order to control sedimentation. All runoff from the disturbed area must pass through a sedimentation pond or ponds. All sediment control structures must be designed, constructed, and maintained in accordance with the specifications contained in the U.S. Soil Conservation Service's "Erosion and Sediment Control Handbook for Developing Areas in West Virginia" unless the director approves the use of an equivalent handbook of guidance, or as otherwise specified in this rule.

~~4.5.2.e.A.~~ 4.5.b.3.A. Design and

Construction Requirements.

~~4.5.2.e.A.(a)~~ 4.5.b.3.A.1.

All sediment control structures must be designed, constructed and certified prior to the commencement of any earthmoving or grading activities in upgradient areas which may contribute runoff to such control structures. Any change to the approved control structures made during construction must be indicated on "as-built" plans showing the approved design, the changes made, and surveyed reference points. All "as-built" plans must be submitted to the director.

~~4.5.2.e.A.(b)~~ 4.5.b.3.A.2.

All sediment control structures must be located as near as possible to the disturbed area. All

sediment control structures must be located out of perennial streams unless otherwise approved by the director.

~~4.5.2.e.A.(e)~~ 4.5.b.3.A.3. All sediment control structures must have a sediment capacity of 0.125 acre-feet for each acre of disturbed area in the structure's watershed. In addition to the sediment capacity, the sediment control structure must have the detention capacity to store a 2-year, 24-hour frequency storm. The water stored from this storm must be released through a nonclogging dewatering device that allows the stored volume of water to be evacuated within a 7-day to 8-day period. The elevation of the nonclogging dewatering device must not be lower than the maximum elevation of the designed sediment storage volume and also satisfy the storm water provisions of the Federal Clean Water Act, as reflected in W. Va. Code §22-11-1 et seq. ~~of the Code of W. Va.~~ and any rules promulgated thereunder.

~~4.5.2.e.A.(d)~~ 4.5.b.3.A.4. All discharges from sediment control structures must not cause a violation of state and federal water quality standards and must meet all effluent limitations as reflected in W. Va. Code §22-11-1 et seq. ~~of the Code of W. Va.~~ and any rules promulgated thereunder.

~~4.5.2.e.A.(e)~~ 4.5.b.3.A.5. All sediment control structures must be designed, constructed, and maintained to prevent short-circuiting.

~~4.5.2.e.A.(f)~~ 4.5.b.3.A.6. All sediment control structures must be cleaned out when the sediment accumulation reaches sixty percent (60%) of the design sediment capacity. The clean-out elevation must be indicated on the plans submitted for the structure. Sediment removal and disposal must be done in a manner that minimizes adverse effects on surface water and groundwater quality.

~~4.5.2.e.A.(g)~~ 4.5.b.3.A.7. All

sediment control structures must be designed, constructed, and maintained to meet the following safety standards:

~~4.5.2.e.A.(g)(A)~~  
4.5.b.3.A.7.(a) An adequate structural foundation must be provided for all structures through the clearing of trees and brush and the exclusion of organic material. Earthen materials used in the construction must be free of trees, roots, brush, frozen soil, organic materials, coal processing materials, construction waste, and other debris. All earthen materials must be properly compacted to prevent excessive settlement.

~~4.5.2.e.A.(g)(B)~~  
4.5.b.3.A.7.(b) Sediment control structures must provide a combination of principal and emergency spillways that will safely discharge a minimum 25-year, 24-hour storm without overtopping of the structure. There must be no outflow through the emergency spillway during the passage of a 10-year, 24-hour frequency storm through the sediment control structure. All spillways must discharge an adequate distance beyond the downstream toe of the structure to a natural drainway to prevent erosion of the downstream toe.

~~4.5.2.e.A.(g)(C)~~  
4.5.b.3.A.7.(c) The contributing drainage area(s) for a sediment control structure must not exceed 200 acres.

~~4.5.2.e.A.(g)(D)~~  
4.5.b.3.A.7.(d) The minimum diameter of the principal spillway and the discharge conduit must be twelve (12) inches.

~~4.5.2.e.A.(g)(E)~~  
4.5.b.3.A.7.(e) A minimum difference in elevation of one and one-half (1.5) feet between the top of the principal spillway and the bottom of the invert of the emergency spillway must be provided. A minimum difference in elevation of one (1) foot of freeboard between the maximum design flow elevation in the emergency spillway

and the top of the settled embankment must be provided.

~~4.5.2.e.A.(g)(F)~~

4.5.b.3.A.7.(f) The vertical distance between the lowest point along the centerline of the sediment control structure and the top (crest) of the sediment control structure must not exceed twenty-five (25) feet.

~~4.5.2.e.A.(g)(G)~~

4.5.b.3.A.7.(g) Appropriate barriers must be provided to control seepage along the conduits that extend through the embankment.

~~4.5.2.e.A.(g)(H)~~

4.5.b.3.A.7.(h) All inspection reports and engineering certifications must be provided to the director.

~~4.5.2.e.A.(g)(I)~~

4.5.b.3.A.7.(i) The sediment control structure must possess a minimum embankment width of ten (10) feet.

~~4.5.2.e.A.(g)(J)~~

4.5.b.3.A.7.(j) The embankment must be designed and constructed with a minimum static safety factor of 1.5.

~~4.5.2.e.A.(g)(K)~~

4.5.b.3.A.7.(k) The embankment must be stabilized and revegetated upon construction.

~~4.5.2.e.A.(h)~~ 4.5.b.3.A.8.

Sediment control structures must be inspected and closed in accordance with section 6 of this rule.

~~4.5.2.e.A.(i)~~ 4.5.b.3.A.9. Any sediment control structure that is an artificial barrier or obstruction, including any works appurtenant to it and any reservoir created by it, which is or will be placed, constructed, enlarged, altered or repaired so that does, or will impound or divert water and:

~~4.5.2.e.A.(i)(A)~~

4.5.b.3.A.9.(a) Is or will be twenty-five (25) feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifteen (15) acre-feet or more of water; or

~~4.5.2.e.A.(i)(B)~~

4.5.b.3.A.9.(b) Is or will be six (6) feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifty (50) acre-feet or more of water; or is, by definition, a "dam" as defined in W. Va. Code §22-14-1 et seq. is subject to regulation under the provisions of W. Va. Code, §22-14-1 et seq.

~~4.5.2.e.A.(j)~~ 4.5.b.3.A.10

Discharge Structures.

Discharge from temporary or permanent sediment control structures, diversions, or stream channel diversions must be controlled by energy dissipaters, riprap channels or other devices approved by the director to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures must be designed in accordance with standard engineering procedures.

~~4.5.2.e.B.~~

4.5.b.3.B.

Abandonment Procedures.

Minimum requirements for abandoning sediment control structures prior to total release of a bond are as follows:

~~4.5.2.e.B.(a)~~ 4.5.b.3.B.1.

Excavated Sediment Pond (Dugout Type).

There is no required abandonment procedure for excavated ponds unless they have an embankment. If they have an embankment, they must follow the abandonment procedures outlined in section part 4.5.2.e.B.(b) 4.5.b.3.B.1 of this rule.

~~4.5.2.c.B.(b)~~ 4.5.b.3.B.2.

Embankment-Type Sediment Control Structures; Embankment-Type Excavated Sediment Control Structures; Crib and Gabion Control Structures.

Sediment control structures and all accumulated sediment above the structure must be removed from the natural drainway if they are built across it. Sediment control structures adjacent to natural drainways must be abandoned by diverting the entrance channel to the natural drainways providing that vegetation has been established on-site, thus preventing any future surface runoff from entering the abandoned sediment control structure. When sediment control structures are removed, the natural drainway must be returned to its original profile and cross-section as near as practical. An original profile and cross-section view for the channel must be submitted with the drainage plan. The channel sides and bottom must be rock riprap. The riprap must extend up to the top of the channel. The riprap requirement may be waived where the bottom and sides of the channel consist of bedrock. Provisions must be made to control sediments during removal of the sediment control structure and any necessary stream channel work.

~~4.5.2.c.B.(c)~~ 4.5.b.3.B.3.

Revegetation of Disturbed Areas.

All areas disturbed during abandonment of a sediment control structure must be seeded and mulched immediately to revegetate and stabilize the disturbed areas.

~~4.5.2.d.~~ 4.5.b.4. Run-off Control System.

~~4.5.2.d.A.~~ 4.5.b.4.A. All permittees must design, construct, operate, and maintain a run-off control system capable of flow collections and controlling from any portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

~~4.5.2.d.B.~~ 4.5.b.4.B. Run-off

from all portions of the landfill, including the active portion must be handled in accordance with ~~Chapter W, Va. Code 22, Article 15 §22-15-1 et seq. of the Code of W. Va.~~

~~4.5.3.~~ 4.5.c. Access Roads.~~4.5.3.a.~~ 4.5.c.1. Access Road Construction Plans.

Construction plans for an access road (i.e., a road used for facility access or for the haulage of solid waste to the facility) must contain the following:

~~4.5.3.a.A.~~ 4.5.c.1.A. A plan view drawn to scale showing the station baseline, the location of each culvert with the drainage flow direction, the location of each intermittent or perennial stream with its flow direction, and other data pertinent to the construction of the access road.

~~4.5.3.a.B.~~ 4.5.c.1.B. A profile based upon survey drawn to scale (the scale should be no greater than 1 inch = 100 feet horizontal and 1 inch = 50 feet vertical) showing the road surface, the location and size of culverts, station elevations, original ground, and percent grades.

~~4.5.3.a.C.~~ 4.5.c.1.C. A cross-section of the access road showing culverts and their slopes, fill materials, original ground, ditches, and sediment control devices.

~~4.5.3.a.D.~~ 4.5.c.1.D. A structure computation sheet and a cross-section showing all data pertinent to the crossing of each intermittent or perennial stream.

~~4.5.3.a.E.~~ 4.5.c.1.E. Construction specifications -- covering excavation, selection and placement of materials, vegetative protection against erosion, road surfacing, drainage, and sediment control -- that incorporate the design criteria set forth in section paragraph 4.5.3.b



4.5.c.2 of this rule.

~~4.5.3.a.E.(a)~~ 4.5.c.1.E.1. All grades referred to in ~~section paragraph 4.5.3.b~~ 4.5.c.2 of this rule must be subject to a tolerance of two percent (2%). All linear measurements referred to in ~~section paragraph 4.5.3.b~~ 4.5.c.2 of this rule must be measured from the horizontal and must be subject to a tolerance of five percent (5%).

~~4.5.3.a.E.(b)~~ 4.5.c.1.E.2. All primary access roads for the facility, including those leading to the active area, must be designed for all-weather operation in accordance with standards of the West Virginia Division of Highways.

~~4.5.3.b.~~ 4.5.c.2. Access Road Construction.

~~4.5.3.b.A.~~ 4.5.c.2.A. Grades.

The grading of an access road must be such that:

~~4.5.3.b.A.(a)~~ 4.5.c.2.A.1. The overall grade must not exceed ten percent (10%).

~~4.5.3.b.A.(b)~~ 4.5.c.2.A.2. The maximum pitch grade must not exceed fifteen percent (15%) for three hundred (300) feet in each one thousand (1,000) feet of road construction. The intersection of the access road with an existing highway must be designed to provide sufficient sight distance and minimum interference with traffic on the highway.

~~4.5.3.b.A.(c)~~ 4.5.c.2.A.3. The surface must pitch toward the ditchline at a minimum rate of one-half (½) inch per foot of surface width or crowned at the minimum rate of one-half (½) inch per foot of surface width as measured from the centerline of the access road.

~~4.5.3.b.B.~~ 4.5.c.2.B. Curves.

The grade on switchback curves must be reduced to less than the approach grade and must not be greater than ten percent (10%);

~~4.5.3.b.C.~~ 4.5.c.2.C. Cut Slopes.

Cut slopes must not be steeper than 1:1 in soils or 1:4 in rock.

~~4.5.3.b.D.~~ 4.5.c.2.D. Drainage Ditches.

A ditch must be provided on both sides of a throughout and on the inside shoulder of a cutfill section, with ditch relief culverts being spaced according to grade. Water must be intercepted or directed around and away from a switchback. All ditchlines must be capable of passing the peak discharge of a 10-year, 24-hour storm. Where superelevation to the inside of a curve will improve the safety of the access road, such as in the head of a hollow, a ditchline may be located on the outside shoulder of the cutfill section provided that the ditchline is designed so that it will remain stable and that drainage control in accordance with the Act is also provided for water on the outside of the curve.

~~4.5.3.b.E.~~ 4.5.c.2.E. Drainage Culverts.

Ditch relief culverts must be installed wherever necessary to ensure proper drainage of surface water beneath or through the access road.

~~4.5.3.b.E.(a)~~ 4.5.c.2.E.1. Culverts must be installed in accordance with the following spacings:

~~4.5.3.b.E.(a)(A)~~ 4.5.c.2.E.1.(a) For a road grade of zero to five percent (0% to 5%), the spacing must be three hundred to eight hundred (300 to 800) feet;

~~4.5.3.b.E.(a)(B)~~ 4.5.c.2.E.1.(b) For a road grade of five to ten percent (5 to 10%), the spacing must be two



hundred to three hundred (200 to 300) feet; and

~~4.5.3.b.E.(a)(C)~~

4.5.c.2.E.1.(c) For a road grade of ten to fifteen percent (10 to 15%), the spacing must be one hundred to two hundred (100 to 200) feet.

~~4.5.3.b.E.(b)~~ 4.5.c.2.E.2.

Culverts must cross the access road at a thirty (30) degree angle downgrade with a minimum grade of three percent (3%) from inlet to outlet, except in the conveyance of intermittent or perennial streams where the pipe must be straight and coincide with the normal flow.

~~4.5.3.b.E.(c)~~ 4.5.c.2.E.3.

The inlet end of each culvert must be protected by a headwall of stable material as approved by the director and the slope at the outlet end must be protected with an apron of rock riprap, energy dissipater, or other material approved by the director.

~~4.5.3.b.E.(d)~~ 4.5.c.2.E.4.

Culverts must be covered by compacted fill to a minimum depth of one (1) foot or one-half (½) of the culvert inside diameter, whichever is greater.

~~4.5.3.b.E.(e)~~ 4.5.c.2.E.5.

Alternative culvert designs may be submitted to the director for approval in cases where the design criteria in ~~section subparagraph 4.5.3.b.E~~ 4.5.c.2.E of this rule is deemed to be impractical.

~~4.5.3.b.F:~~ 4.5.c.2.F. Culvert

Openings.

Culvert openings installed on an access road must not be less than one hundred (100) square inches in area, but, in any event, all culvert openings must be of adequate capacity to carry the peak discharge capacity of a 1-year, 24-hour storm from the contributing watershed and must receive necessary maintenance to function properly at all times.

~~4.5.3.b.G:~~ 4.5.c.2.G. Intermittent

or Perennial Stream Crossing.

Culverts, bridges, or other drainage structures must be used to cross intermittent or perennial streams. Consideration must be given to such factors as weather conditions, season of the year, and time period for construction with regard to using measures to minimize adverse effects to the water quality and stream channel. In no event may the sediment load of the stream be significantly increased or the water quality be significantly decreased during the construction period. Water control structures must be designed with a discharge capacity capable of passing the peak runoff of a 10-year, 24-hour storm from the contributing watersheds. If approved by the director, the capacity of the water control structure itself can be at least equal to or greater than the stream channel discharge capacity immediately upstream and downstream of the crossing provided the structure can pass at least a 1-year, 24-hour storm.

~~4.5.3.b.H:~~ 4.5.c.2.H. Sediment

Control.

A sediment storage volume must be provided equal to 0.125 acre-feet for each acre of disturbed area and the storm water provisions of the Federal Clean Water Act, as reflected in W. Va. Code §22-11-1 et seq. ~~of the Code of W. Va.~~ and any rules promulgated thereunder. A lesser value may be approved by the director. Temporary erosion and sedimentation control measures must be implemented during construction until permanent sedimentation control can be established.

~~4.5.3.b.I:~~ 4.5.c.2.I. Revegetation

of Slopes.

All disturbed area including fill and cut slopes, must be revegetated by the use of seed and mulch immediately, unless approved by the director, after the construction of an access road and that revegetation must be maintained thereafter as necessary to control or prevent erosion.

~~4.5.3.b.J.~~ 4.5.c.2.J. Surfacing.

An access road must not be surfaced with any acid-producing or toxic materials and the surface must be maintained in a manner that controls or prevents erosion and siltation.

~~4.5.3.e.~~ 4.5.c.3. Removal of Drainage Structures.

Bridges, culverts, and stream crossings necessary to provide access to the facility must not be removed until reclamation is completed and approved by the director. The same precautions as to water quality are to be taken during removal of drainage structures as those taken during construction and use.

~~4.5.3.d.~~ 4.5.c.4. Existing Access Roads.

Where existing roads are to be used for access or haulage, the requirements of ~~sections subparagraphs 4.5.3.b.A 4.5.c.2.A through 4.5.3.b.E 4.5.c.2.E~~ of this rule may be waived by the director if it can be demonstrated that reconstruction to meet the requirements of ~~section subdivision 4.5.3 4.5.c~~ of this rule would result in greater environmental harm than is produced by existing conditions and that the drainage requirements in ~~section paragraph 4.5.3.b 4.5.c.2~~ of this rule can otherwise be met.

~~4.5.3.e.~~ 4.5.c.5. Infrequently Used Access Roads.

Access roads constructed for and used only to provide infrequent service to facilities such as monitoring devices may be exempted by the director from compliance with the requirements of ~~sections subparagraphs 4.5.3.b.A 4.5.c.2.A, 4.5.3.b.H 4.5.c.2.H and 4.5.3.b.I 4.5.c.2.I~~ of this rule.

~~4.5.3.f.~~ 4.5.c.6. Dust Control.

All reasonable means must be employed to control dust from the surface of access roads, including those statutes, rules and regulations of the W. Va. Office of Air Quality.

~~4.5.3.g.~~ 4.5.c.7. Abandonment of Access Roads.

Access roads must be abandoned in accordance with the following:

~~4.5.3.g.A.~~ 4.5.c.7.A. Every effort must be made when an access road is abandoned to prevent erosion by the use of culverts, water bars, or other devices. Water bars or earth berms must be installed in accordance with the following spacings;

~~4.5.3.g.A.(a)~~ 4.5.c.7.A.1. For a grade of zero to five percent (0% to 5%), the spacing must be three hundred to eight hundred (300 to 800) feet;

~~4.5.3.g.A.(b)~~ 4.5.c.7.A.2. For a grade of five to ten percent (5 to 10%), the spacing must be two hundred to three hundred (200 to 300) feet; and

~~4.5.3.g.A.(c)~~ 4.5.c.7.A.3. For a grade of ten to fifteen percent (10 to 15%), the spacing must be one hundred to two hundred (100 to 200) feet.

~~4.5.3.g.B.~~ 4.5.c.7.B. The land covered by an access road must be revegetated by the use of seed and mulch immediately, unless approved by the director, after the abandonment of the road in accordance with ~~section subdivision 4.5.6 4.5.f~~ of this rule.

~~4.5.4.~~ 4.5.d. Liners.~~4.5.4.a.~~ 4.5.d.1. Liner System Requirements.

A person who receives a permit for a landfill after the effective date of this rule -- including a

permit that results in an expansion of a currently permitted landfill -- must design, construct, operate, and maintain a liner system at that landfill. Nothing within this rule may be construed to allow the installation of any liner system on areas not lined as of the effective date of this rule that is not in conformance with ~~section subparagraph~~ 4.5.4.a.C 4.5.d.1.C or 4.5.4.a.E 4.5.d.1.E of this rule. Landfills that do have an Article W. Va. Code §22-15 permit and a liner installed as of that date may install a liner as approved by the director in accordance with the following:

4.5.4.a.A. 4.5.d.1.A. A landfill for which a valid closure permit has been issued pursuant to W. Va. Code §22-15-10 may remain in operation after the date of this rule, provided that -- the facility is in conformance with its permit and this rule, and such landfill has in place:

4.5.4.a.A.(a) 4.5.d.1.A.1. Groundwater monitoring wells in conformance with the requirements of section subdivision 3.8.4 3.8.d of this rule;

4.5.4.a.A.(b) 4.5.d.1.A.2. A groundwater monitoring program in conformance with the requirements of section subsection 4.11 of this rule;

4.5.4.a.A.(c) 4.5.d.1.A.3. An effective leachate treatment capability; and

4.5.4.a.A.(d) 4.5.d.1.A.4. Sediment run-off control.

4.5.4.a.B. 4.5.d.1.B. All new SWLFs and lateral expansions that meets all of the requirements enumerated in sections subparagraphs 4.5.4.a.A 4.5.d.1.A and 4.5.4.a.B 4.5.d.1.B of this rule, may remain in operation provided that: the liner must meet the following criteria:

4.5.4.a.B.(a) 4.5.d.1.B.1. The liner must be constructed, installed and

maintained in accordance with a design approved by the director.

4.5.4.a.B.(b) 4.5.d.1.B.2. The design must ensure that the concentration values listed in Appendix III to this rule will not be exceeded in the uppermost aquifer at the relevant point of compliance, as specified by the director under section subparagraph 4.5.4.a.G, 4.5.d.1.G or;

4.5.4.a.B.(c) 4.5.d.1.B.3. With a composite liner, as defined in section 2 and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.

4.5.4.a.C. 4.5.d.1.C. A liner system must consist of the following elements:

4.5.4.a.C.(a) 4.5.d.1.C.1. Subbase, which is the prepared layer of soil or earthen materials upon which the remainder of the liner system is constructed;

4.5.4.a.C.(b) 4.5.d.1.C.2. Leachate detection zone, which consists of a perforated piping system within a layer of soil or earthen material placed on top of the subbase and upon which the composite liner is placed;

4.5.4.a.C.(c) 4.5.d.1.C.3. Composite liner, which consists of two (2) components; the compacted clay component topped with the synthetic liner; and

4.5.4.a.C.(d) 4.5.d.1.C.4. Leachate collection and protective cover zone, which is a leachate collection system within a prepared lay layer of soil or earthen material placed over the composite liner.

4.5.4.a.D. 4.5.d.1.D. Active areas of existing landfills which have installed liners, leachate collection systems, and groundwater monitoring programs, as of the effective date of this rule, may petition the director to allow use of

an alternative liner system, if:

~~4.5.4.a.D.(a)~~ 4.5.d.1.D.1. A demonstration is made to the director that an alternative design will provide the same degree of protection of the groundwater resources as the liner system described in ~~section~~ subparagraph 4.5.4.a.E 4.5.d.1.E of this rule. The demonstration must include a series of groundwater monitoring well sampling analyses and also the direction-of-migration and rate-of-flow studies showing that there are no existing or potential groundwater pollution problems; and

~~4.5.4.a.D.(b)~~ 4.5.d.1.D.2. A bond or other applicable means of financial assurance is posted in compliance with ~~sections~~ subdivision 3.7.i to 3.7.j and subsection 3.13.

~~4.5.4.a.E.~~ 4.5.d.1.D. In order to allow for the development of new technology, applicants may petition the director to allow installation of an alternative liner system upon a demonstration to the director that the alternative system will be equally or more protective of the groundwater resources than the liner system described in ~~section~~ subdivision 4.5.4 4.5.d of this rule.

~~4.5.4.a.F.~~ 4.5.d.1.D. Alternative Liner Design.

Any permittee who wishes to utilize an alternative liner design must submit a design to the director that complies with ~~section~~ subdivision 4.5.4 4.5.d of this rule, and must address the following factors:

~~4.5.4.a.F.(a)~~ 4.5.d.1.F.1. The hydrogeologic characteristics of the facility and surrounding land;

~~4.5.4.a.F.(b)~~ 4.5.d.1.F.2. The climatic factors of the area; and

~~4.5.4.a.F.(c)~~ 4.5.d.1.F.3. The volume and physical and chemical characteristics

of the leachate.

~~4.5.4.a.G.~~ 4.5.d.1.G. Relative Relevant Point of Compliance.

~~4.5.4.a.G.(a)~~ 4.5.d.1.G.1. The relevant point of compliance specified by the director must be no more than 150 meters (492 feet) from the waste management unit boundary and must be located on land owned by the owner of the SWLF.

~~4.5.4.a.G.(b)~~ 4.5.d.1.G.2. In determining the relevant point of compliance, the director must consider at least the following factors:

~~4.5.4.a.G.(b)(A)~~ 4.5.d.1.G.2.(1) The hydrogeologic characteristics of the facility and surrounding land;

~~4.5.4.a.G.(b)(B)~~ 4.5.d.1.G.2.(2) The volume and physical and chemical characteristics of the leachate;

~~4.5.4.a.G.(b)(C)~~ 4.5.d.1.G.2.(3) The quantity, quality, and direction, of flow of groundwater;

~~4.5.4.a.G.(b)(D)~~ 4.5.d.1.G.2.(4) The proximity and withdrawal rate of the groundwater users;

~~4.5.4.a.G.(b)(E)~~ 4.5.d.1.G.2.(5) The availability of alternative drinking water supplies;

~~4.5.4.a.G.(b)(F)~~ 4.5.d.1.G.2.(6) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently, or reasonably expected to be used, for drinking water;

~~4.5.4.a.G.(b)(G)~~ 4.5.d.1.G.2.(7) Public health, safety, and welfare

effects; and

~~4.5.4.a.G.(b)(H)~~

4.5.d.1.G.2.(8) Practicable capability of the permittee.

~~4.5.4.b.~~ 4.5.d.2. Liner System Limitations.

~~4.5.4.b.A.~~ 4.5.d.2.A. No person may construct a liner system for a facility unless there is at least four (4) feet maintained between the bottom of the subbase of the liner system and the seasonal high groundwater table.

~~4.5.4.b.A.(a)~~ 4.5.d.2.A.1. The location of the seasonal high groundwater table may be inferred by such indicators as soil mottling, soil gleying and iron and manganese concentrations.

~~4.5.4.b.A.(b)~~ 4.5.d.2.A.2. Drainage systems may be utilized to maintain a four (4) foot isolation distance between the bottom of the subbase of the liner system and the seasonal high groundwater table. The drainage system must be limited to drain tile, piping, and french drains.

~~4.5.4.b.B.~~ 4.5.d.2.B. No person may construct a liner system for a facility unless at least eight (8) feet can be maintained between the bottom of the subbase of the liner system and the permanent groundwater table.

~~4.5.4.b.C.~~ 4.5.d.2.C. A minimum of four (4) feet vertical separation must be maintained between the bottom of the subbase of the liner system and bedrock unless otherwise approved by the director. If backfilled material is used, the nature of these materials is subject to approval by the director.

~~4.5.4.b.D.~~ 4.5.d.2.D. If the approved design plans provide for the placement of additional adjacent liner, waste may not be placed within fifteen (15) feet of an edge of the

liner that will be joined by an additional adjacent liner. The edge must be protected by soil cover or other method approved in the permit until additional liner is added.

~~4.5.4.b.E.~~ 4.5.d.2.E. If the approved design plans do not provide for the placement of additional adjacent liner, waste must not be placed within five (5) feet of an edge of the liner.

~~4.5.4.b.F.~~ 4.5.d.2.F. A liner berm at least four (4) feet high must be constructed and maintained along the edge of the liner to prevent the lateral escape of leachate.

~~4.5.4.b.G.~~ 4.5.d.2.G. The edge of the liner must be clearly marked.

~~4.5.4.b.H.~~ 4.5.d.2.H. The operator must comply with additional requirements the director deems necessary to protect public health, safety, and the environment.

~~4.5.4.c.~~ 4.5.d.3. Liner System Subbase.

~~4.5.4.c.A.~~ 4.5.d.3.A. The subbase portion of a liner system must:

~~4.5.4.c.A.(a)~~ 4.5.d.3.A.1. Be at least six (6) inches thick and compacted to a Standard Proctor density of at least ninety-five percent (95%) at three to five percent (3% to 5%) wet of optimum;

~~4.5.4.c.A.(b)~~ 4.5.d.3.A.2. Have a minimum bearing capacity of two and one-quarter tons per square foot plus one-half of the total applied load in pounds per square foot;

~~4.5.4.c.A.(c)~~ 4.5.d.3.A.3. Be no more permeable than  $1 \times 10^{-6}$  cm/sec based on laboratory and field testing;

~~4.5.4.c.A.(d)~~ 4.5.d.3.A.4. Be hard, uniform, smooth, and free of debris, rock,

plant materials, and other foreign material; and

~~4.5.4.e.A.(e)~~ 4.5.d.3.A.5.

Have a slope of at least two percent (2%).

~~4.5.4.e.A.(f)~~ 4.5.d.3.A.6.

The subbase construction certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of any material over the subbase.

~~4.5.4.d.~~ 4.5.d.4. Liner System  
Leachate Detection Zone.

~~4.5.4.d.A.~~ 4.5.d.4.A. The leachate detection zone must:

~~4.5.4.d.A.(a)~~ 4.5.d.4.A.1.

Create a flow zone between the subbase and the composite liner more permeable than  $1 \times 10^{-3}$  cm/sec based on laboratory and field testing. The leachate detection zone including piping system must be designed and placed on a minimum slope of two percent (2%);

~~4.5.4.d.A.(b)~~ 4.5.d.4.A.2.

Be at least twelve (12) inches thick;

~~4.5.4.d.A.(c)~~ 4.5.d.4.A.3.

Be comprised of clean soil or earthen materials that contain no debris, plant material, or material with sharp edges;

~~4.5.4.d.A.(d)~~ 4.5.d.4.A.4.

Have geotextile material placed within the leachate detection zone in such a manner as to prevent clogging of the piping system. The geotextile material must not be placed directly against pipes; and

~~4.5.4.d.A.(e)~~ 4.5.d.4.A.5.

Contain a perforated piping system capable of detecting and intercepting liquid within the leachate detection zone and conveying the liquid to central collection points, as follows:

~~4.5.4.d.A.(e)(A)~~

4.5.d.4.A.5.(a). The slope, size, and spacing of

the piping system must assure that liquids drain efficiently from the leachate detection zone;

~~4.5.4.d.A.(e)(B)~~

4.5.d.4.A.5.(b) The distance between pipes in the piping system must not exceed one hundred (100) feet on center unless otherwise approved by the director;

~~4.5.4.d.A.(e)(C)~~

4.5.d.4.A.5.(c) The pipes must be installed nearly perpendicular to the slope with continuous positive slope;

~~4.5.4.d.A.(e)(D)~~

4.5.d.4.A.5.(d) The minimum diameter of the perforated pipe must be four (4) inches with a wall thickness of Schedule 40 or greater;

~~4.5.4.d.A.(e)(E)~~

4.5.d.4.A.5.(e) The pipe must be capable of supporting anticipated loads without failure based upon facility design;

~~4.5.4.d.A.(e)(F)~~

4.5.d.4.A.5.(f) Rounded stones or aggregates must be placed around all portions of the pipes of the piping system. The stones or aggregates must be sized to prevent clogging of the pipes and damage to the subbase and the composite liner;

~~4.5.4.d.A.(e)(G)~~

4.5.d.4.A.5.(g) The piping system must be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers must be located along the perimeter of the leachate collection piping system. The number and spacing of the manholes or cleanout risers must be sufficient to ensure proper maintenance of the piping system by water jet flushing or an equivalent method;

~~4.5.4.d.A.(e)(H)~~

4.5.d.4.A.5.(h) The leachate detection system must be cleaned and maintained as necessary; and

~~4.5.4.d.A.(e)(I)~~



4.5.d.4.A.5.(i) The leachate detection zone construction certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of the composite liner.

4.5.4.e. 4.5.d.5. Liner System Composite Liner.

The composite liner must be comprised of the following components, unless otherwise approved in writing by the director:

4.5.4.e.A. 4.5.d.5.A. The compacted clay component must:

4.5.4.e.A.(a) 4.5.d.5.A.1. Be a minimum compacted thickness of two (2) feet;

4.5.4.e.A.(b) 4.5.d.5.A.2. Be compacted in six (6) inch lifts;

4.5.4.e.A.(c) 4.5.d.5.A.3. Be no more permeable than  $1 \times 10^{-7}$  cm/sec based on laboratory and field testing;

4.5.4.e.A.(d) 4.5.d.5.A.4. Be free of particles greater than two (2) inches in any dimension, and must also be free of debris, rock, plant materials, and other foreign materials;

4.5.4.e.A.(e) 4.5.d.5.A.5. Be placed without damaging the subbase and leachate detection zone;

4.5.4.e.A.(f) 4.5.d.5.A.6. Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted clay nor the subbase are frozen;

4.5.4.e.A.(g) 4.5.d.5.A.7. Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface; and

4.5.4.e.A.(h) 4.5.d.5.A.8. Be designed, operated, and maintained so that the

physical and chemical characteristics of the liner and liner's ability to restrict the flow of solid waste, solid waste constituents, or leachate is not adversely affected by the leachate.

4.5.4.e.A.(i) 4.5.d.5.A.9. The director may approve the substitution of three (3) feet of compacted soil for the required two (2) feet of compacted clay if equivalency of groundwater protection can be proven.

4.5.4.e.B. 4.5.d.5.B. The synthetic component must:

4.5.4.e.B.(a) 4.5.d.5.B.1. Be no more permeable than  $1 \times 10^{-7}$  cm/sec;

4.5.4.e.B.(b) 4.5.d.5.B.2. Have a minimum thickness of sixty (60) mils;

4.5.4.e.B.(c) 4.5.d.5.B.3. Be installed in accordance with manufacturers' specifications under the supervision of an authorized representative of the manufacturer;

4.5.4.e.B.(d) 4.5.d.5.B.4. Be inspected for uniformity, damage, and imperfections during construction or installation;

4.5.4.e.B.(e) 4.5.d.5.B.5. Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface;

4.5.4.e.B.(f) 4.5.d.5.B.6. Be designed to withstand the calculated tensile forces acting upon the synthetic materials when installed on slopes greater than twenty-five percent (25%);

4.5.4.e.B.(g) 4.5.d.5.B.7. Have field seams oriented parallel to the line of the maximum slope and not across the slope. In corners and irregularly-shaped portions, the number of field seams must be minimized. No horizontal seam may be less than five (5) feet from the toe of slope;



4.5.4.e.B.(h) 4.5.d.5.B.8.

Have the seam area free of moisture, dust, dirt, debris, and foreign material of any kind before seaming. Field seaming is prohibited, unless otherwise approved by the director when the ambient air temperature is below five degrees centigrade (5 degrees C), above forty degrees centigrade (40 degrees C), during precipitation or when winds are in excess of twenty (20) miles per hour;

4.5.4.e.B.(i) 4.5.d.5.B.9.

Be anchored a minimum of twenty-four (24) inches horizontally back from the edge of the top of the slope. The liner must be anchored by cutting a trench twelve (12) to sixteen (16) inches in depth, laying the liner across the soil perimeter of the trench, backfilling the trench, and compacting the backfill material; and

4.5.4.e.B.(j) 4.5.d.5.B.10.

Be installed under the direction of a field crew foreman or other person approved in writing by the director with documented successful liner installation experience.

4.5.4.e.C. 4.5.d.5.C.

The certification of the construction of the composite liner compacted clay component and a Q.A./Q.C. report must be submitted to the director prior to the placement of the composite liner synthetic component.

4.5.4.e.D. 4.5.d.5.D.

The composite liner synthetic component construction certification and the Q.A./Q.C. report must be submitted to the director prior to the placement of the leachate collection and protective cover zone.

4.5.4.f. 4.5.d.6. Liner System Leachate Collection and Protective Cover Zone.

4.5.4.f.A. 4.5.d.6.A. The leachate collection and protective cover zone must:

4.5.4.f.A.(a) 4.5.d.6.A.1.

Create a flow zone between the composite liner

and solid waste more permeable than  $1 \times 10^{-3}$  cm/sec based upon both laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the composite liner;

4.5.4.f.A.(b) 4.5.d.6.A.2.

Be at least eighteen (18) inches thick;

4.5.4.f.A.(c) 4.5.d.6.A.3.

Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the composite liner does not exceed one (1) foot at the expected flow capacity from the drainage area except during storm events;

4.5.4.f.A.(d) 4.5.d.6.A.4.

Be comprised of clean soil or earthen materials that contain no debris, plant materials, rocks, or other solid materials larger than one-quarter (1/4) inch in diameter and no material with sharp edges;

4.5.4.f.A.(e) 4.5.d.6.A.5.

Be graded, uniformly compacted, and smoothed;

4.5.4.f.A.(f) 4.5.d.6.A.6.

Be installed in a manner that prevents damage to the composite liner;

4.5.4.f.A.(g) 4.5.d.6.A.7.

Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system must also meet the following:

4.5.4.f.A.(g)(A)

4.5.d.6.A.7.(a) The slope, sizing and spacing of the piping system must ensure that liquids drain efficiently from the leachate collection zone;

4.5.4.f.A.(g)(B)

4.5.d.6.A.7.(b) The distance between pipes in the piping system must not exceed one hundred (100) feet on center unless otherwise approved by the

director;

~~4.5.4.f.A.(g)(C)~~

4.5.d.6.A.7.(c) The pipes must be installed nearly perpendicular to the slope with continuous positive slope;

~~4.5.4.f.A.(g)(D)~~

4.5.d.6.A.7.(d) The minimum diameter of the perforated pipe must be four (4) inches with a wall thickness of Schedule 40 or greater;

~~4.5.4.f.A.(g)(E)~~

4.5.d.6.A.7.(e) The pipe must be capable of supporting anticipated loads without failure based upon facility design;

~~4.5.4.f.A.(g)(F)~~

4.5.d.6.A.7.(f) Rounded stones or aggregates must be placed around all portions of the pipes of the piping system. The stones or aggregates must be sized to prevent clogging of the pipes and damage to the composite liner;

~~4.5.4.f.A.(g)(G)~~

4.5.d.6.A.7.(g) The piping system must be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes and cleanout risers must be located along the perimeter of the leachate detection piping system. The number and spacing of the manholes and cleanout risers must be sufficient to ensure proper maintenance of the piping system by water jet flushing or an equivalent method;

~~4.5.4.f.A.(g)(H)~~

4.5.d.6.A.7.(h) The leachate collection system must be cleaned and maintained as necessary; and

~~4.5.4.f.A.(g)(I)~~

4.5.d.6.A.7.(i) Have geotextile material placed within the leachate collection system in such a manner as to prevent clogging of the piping system. The geotextile material must not be placed directly against pipes.

~~4.5.4.f.B. 4.5.d.6.B.~~ The leachate

collection zone construction certification and the Q.A./Q.C. report must be submitted to the director prior to the placement of solid waste.

~~4.5.4.g. 4.5.d.7.~~ Liner System Engineer Certification.

~~4.5.4.g.A. 4.5.d.7.A.~~ The liner system must be inspected during, and at the end of the construction by a registered professional engineer.

~~4.5.4.g.B. 4.5.d.7.B.~~ Upon completion of construction of each major element or stage of the liner system, including the subbase, leachate detection zone, composite liner, leachate collection zone and protective cover (and prior to the deposition of waste), the engineer must certify to the director under seal that the element or stage was constructed as approved in the permit.

~~4.5.4.h. 4.5.d.8.~~ Liner System Initial Placement of Solid Waste.

The first eight (8) feet of solid waste placed on the protective cover must not contain material capable of penetrating or puncturing the protective cover.

~~4.5.5. 4.5.e.~~ Quality Assurance and Quality Control.

The quality control measures and tests required by the Q.A./Q.C. plan under ~~section subdivision~~ 4.5.5 4.5.e of this rule must be employed to ensure that the engineering design and performance standards are achieved.

~~4.5.5.a. 4.5.e.1.~~ The Q.A./Q.C. inspector will inspect those aspects of the subbase and subgrade preparation including, but not limited to, the following:

~~4.5.5.a.A. 4.5.e.1.A.~~ Subgrade Preparation.

~~4.5.5.a.A.(a) 4.5.e.1.A.1.~~ Site

preparation, including clearing, and grubbing;

~~4.5.5.a.A.(b)~~ 4.5.e.1.A.2.  
Excavation and contouring of the subgrade to required elevations;

~~4.5.5.a.B.~~ 4.5.e.1.B. Subbase Preparation.

~~4.5.5.a.B.(a)~~ 4.5.e.1.B.1.  
Compaction of subbase to design density at proper moisture content to achieve required strength and stability to support the liner;

~~4.5.5.a.B.(b)~~ 4.5.e.1.B.2.  
Moisture content density and field strength tests performed as required;

~~4.5.5.a.B.(c)~~ 4.5.e.1.B.3.  
Compacted lift thickness;

~~4.5.5.a.B.(d)~~ 4.5.e.1.B.4.  
Compaction equipment weight, speed, and number of passes;

~~4.5.5.a.B.(e)~~ 4.5.e.1.B.5.  
Method of moisture addition;

~~4.5.5.a.B.(f)~~ 4.5.e.1.B.6.  
Proof rolling of subbase; and

~~4.5.5.a.B.(g)~~ 4.5.e.1.B.7. Fine finishing of the subbase for acceptability of areas to be lined.

~~4.5.5.b.~~ 4.5.e.2. The Q.A./Q.C. inspector must inspect those aspects of the liner system including, but not limited to, the following:

~~4.5.5.b.A.~~ 4.5.e.2.A. Liner material to ensure that the materials being used meet specifications;

~~4.5.5.b.B.~~ 4.5.e.2.B. Liner material stockpiling, storage, and handling in a manner that prevents damage;

~~4.5.5.b.C.~~ 4.5.e.2.C. Inspections of locations where inlet/outlet structures that penetrate the liner to ensure the compatibility of those structures with respect to the liner;

~~4.5.5.b.D.~~ 4.5.e.2.D. Final grades of the liner to ensure that they are within acceptable tolerance;

~~4.5.5.b.E.~~ 4.5.e.2.E. Final inspection of the liner for acceptability prior to placement of the protective cover material;

~~4.5.5.b.F.~~ 4.5.e.2.F. Installation of the compacted clay component of the liner with respect to the following:

~~4.5.5.b.F.(a)~~ 4.5.e.2.F.1.  
Compaction of the liner to design density at the proper moisture content to achieve the required hydraulic conductivity and the maintenance of the design strength and stability;

~~4.5.5.b.F.(b)~~ 4.5.e.2.F.2.  
Uniformity of compaction;

~~4.5.5.b.F.(c)~~ 4.5.e.2.F.3.  
Compacted lift thickness;

~~4.5.5.b.F.(d)~~ 4.5.e.2.F.4.  
Compacted liner thickness;

~~4.5.5.b.F.(e)~~ 4.5.e.2.F.5.  
Compaction equipment weight, speed, and number of passes;

~~4.5.5.b.F.(f)~~ 4.5.e.2.F.6.  
Moisture content, density, hydraulic conductivity, and field infiltration tests to ensure that they are performed as required; and

~~4.5.5.b.F.(g)~~ 4.5.e.2.F.7.  
Repairs and corrective or remedial action performed as required;

~~4.5.5.b.G.~~ 4.5.e.2.G. Synthetic liner component with respect to the following:

4.5.5.b.G.(a) 4.5.e.2.G.1.

Liner panel placement is in accordance with required configuration;

4.5.5.b.G.(b) 4.5.e.2.G.2.

Permanent and temporary anchoring procedures are followed;

4.5.5.b.G.(c) 4.5.e.2.G.3.

Overlap and seam width are in accordance with the design;

4.5.5.b.G.(d) 4.5.e.2.G.4.

The area of seaming is clean and supported;

4.5.5.b.G.(e) 4.5.e.2.G.5.

The uniformity and continuity of seams and welds;

4.5.5.b.G.(f) 4.5.e.2.G.6.

Cap strips are installed on all seams, as applicable;

4.5.5.b.G.(g) 4.5.e.2.G.7.

Qualitative and quantitative field seaming tests are performed as required for imperfections in seams, wrinkles, and fishmouths and that all imperfections are repaired as required; and

4.5.5.b.G.(h) 4.5.e.2.G.8.

Corrective or remedial action taken;

4.5.5.b.H. 4.5.e.2.H.

The Q.A./Q.C. inspector must inspect those aspects of the leachate detection, and leachate collection and protective cover systems including, but not limited to, the following:

4.5.5.b.H.(a) 4.5.e.2.H.1.

Material stockpiling, storage, and handling to prevent damage;

4.5.5.b.H.(b) 4.5.e.2.H.2.

Drainage layer placement;

4.5.5.b.H.(c) 4.5.e.2.H.3.

Thickness of the leachate detection, leachate collection and protective cover zones;

4.5.5.b.H.(d) 4.5.e.2.H.4.

Grain size analyses, relative density and compaction tests are performed as required;

4.5.5.b.H.(e) 4.5.e.2.H.5.

Uniformity of the soil;

4.5.5.b.H.(f) 4.5.e.2.H.6.

Grades and alignments are within acceptable tolerance;

4.5.5.b.H.(g) 4.5.e.2.H.7.

Placement of stone or aggregate around all portions of the pipes in the piping systems;

4.5.5.b.H.(h) 4.5.e.2.H.8.

Proper implementation of actions to protect the piping system and the other components of the liner system from the loads and stresses due to the traffic of backfilling and other equipment; and

4.5.5.b.H.(i) 4.5.e.2.H.9.

Proper placement of the geotextile materials within the leachate detection zone and within the leachate collection and protective cover zone.

4.5.5.b.I. 4.5.e.2.I.

Daily Q.A./Q.C. reports must be prepared by the Q.A./Q.C. inspectors and maintained in a bound log book which must be available at the job site at all times for inspection by the director. All lab reports and field testing results must be signed and dated by the inspector, and must be attached to the log book reports. Each daily log book report must include, but not be limited to, the following:

4.5.5.b.I.(a) 4.5.e.2.I.1.

Identification of project name, location, and date;

4.5.5.b.I.(b) 4.5.e.2.I.2.

Weather conditions prevalent during construction and installation including:

4.5.5.b.I.(b)-(A)

4.5.e.2.I.2.(a) Temperature (daily high and low);

~~4.5.5.b.I.(b)(B)~~  
4.5.e.2.I.2.(b) Barometric pressure (high and low);

~~4.5.5.b.I.(b)(C)~~  
4.5.e.2.I.2.(c) Wind direction and maximum speed;

~~4.5.5.b.I.(b)(D)~~  
4.5.e.2.I.2.(d) Time of each precipitation event; and

~~4.5.5.b.I.(b)(E)~~  
4.5.e.2.I.2.(e) Total amount of each precipitation event;

~~4.5.5.b.I.(e)~~ 4.5.e.2.I.3.  
 Description and location of construction currently underway;

~~4.5.5.b.I.(d)~~ 4.5.e.2.I.4. A listing of all equipment and personnel at work at each unit;

~~4.5.5.b.I.(e)~~ 4.5.e.2.I.5.  
 Description and location of areas being tested or observed;

~~4.5.5.b.I.(f)~~ 4.5.e.2.I.6. Off-site material received and quality verification documentation;

~~4.5.5.b.I.(g)~~ 4.5.e.2.I.7.  
 Calibration of test equipment;

~~4.5.5.b.I.(h)~~ 4.5.e.2.I.8.  
 Description and location of remedial action taken; and

~~4.5.5.b.I.(i)~~ 4.5.e.2.I.9.  
 Decisions and comments including conversations, directives, and directions for the following:

~~4.5.5.b.I.(i)(A)~~  
4.5.e.2.I.9.(a) Acceptance or failure of inspections and tests;

~~4.5.5.b.I.(i)(B)~~  
4.5.e.2.I.9.(b) Acceptance or failure of daily work unit performance;

~~4.5.5.b.I.(i)(C)~~  
4.5.e.2.I.9.(c) Problems encountered and corrective action taken;

~~4.5.5.b.I.(i)(D)~~  
4.5.e.2.I.9.(d) On-going corrective action;

~~4.5.5.b.I.(i)(E)~~  
4.5.e.2.I.9.(e) In-field modifications; and

~~4.5.5.b.I.(i)(F)~~  
4.5.e.2.I.9.(f) Assessment of overall project quality.

#### ~~4.5.6.~~ 4.5.f. Revegetation Plan.

~~4.5.6.a.~~ 4.5.f.1. Function of Annual and Biennial Cover Crops.

On areas where erosion is likely to occur, rapid establishment of vegetative cover is required. Immediate revegetation by the use of seeding and mulching with approved annuals and biennials on such areas must be approved as a means for achieving temporary vegetative cover only.

~~4.5.6.b.~~ 4.5.f.2. Minimum Requirements of Soil Amendments.

~~4.5.6.b.A.~~ 4.5.f.2.A. A minimum of six hundred pounds per acre (600 lbs/acre) of 10-20-10 or 10-20-20 fertilizer, or equivalent, must be applied. Fertilizer rates based on soil analyses conducted by a qualified lab may be substituted for the minimum fertilizer rate.

~~4.5.6.b.B.~~ 4.5.f.2.B. Lime is required where soil pH is less than 5.5. Lime rates must be such that a standard soil pH of 6.0 is achieved.

~~4.5.6.b.C.~~ 4.5.f.2.C. Mulch must

be used on all disturbed areas. A list of approved materials and minimum application rates is available from the director.

4.5.6.e. 4.5.f.3. Standards for Evaluating Vegetative Cover.

4.5.6.e.A. 4.5.f.3.A. Final Revegetation Report.

The report must be submitted to the director within sixty (60) days after the final cover or cap has been completed and contain the actual acreage planted including the application rates of soil amendments, including fertilizer, lime, mulch, and seeding mixture.

4.5.6.e.B. 4.5.f.3.B. Time for Inspection.

Prior to the spring and fall planting seasons, the operator must review all disturbed areas. Those areas that will not be disturbed again must be graded, limed, fertilized, mulched, and seeded. Those areas that have been previously seeded but are deficient of vegetative cover must be reseeded to establish a satisfactory stand of vegetation. Disturbed areas that may sit idle for more than sixty (60) days must be temporarily revegetated.

4.5.6.e.C. 4.5.f.3.C. Standards for Perennials.

Standards for legumes and perennial grasses are required to achieve at least a ninety percent (90%) ground cover. Substandard areas must not exceed one-quarter acre in size, nor total more than ten percent (10%) of the revegetated area.

4.5.7. 4.5.g. Miscellaneous.

All facilities must be designed to meet the following requirements:

4.5.7.a. 4.5.g.1. A method of controlling any dust or windblown debris must be included in the facility design. The factors which

will be considered by the director when evaluating alternative provisions for controlling dust and windblown debris includes the remoteness of the facility, natural screening and windbreaks, and waste types;

4.5.7.b. 4.5.g.2. Access to the facility must be restricted through the use of fencing, natural barriers, or other methods approved in writing by the director;

4.5.7.c. 4.5.g.3. A minimum separation distance of one hundred (100) feet must be maintained between the limits of waste filling and all adjacent property lines. A minimum distance of fifty (50) feet must be maintained between any permanent berms or excavations associated with the facility (excluding surface water diversion structures) and all adjacent property lines;

4.5.7.d. 4.5.g.4. The facility must be designed so that final grades in each phase are reached as soon as possible and the open area used for refuse filling is minimized;

4.5.7.e. 4.5.g.5. The grade of the final surface of the facility must not be less than three percent (3%) nor more than twenty-five percent (25%) unless otherwise approved by the director as a part of the issued permit. Long slopes must incorporate runoff control measures and terracing in order to minimize erosion. For sites having a natural slope greater than twenty-five percent (25%), a slope up to thirty-three percent (33%) may be considered acceptable if terracing is incorporated at least every twenty (20) feet of vertical distance with runoff control.

4.5.7.f. 4.5.g.6. All facilities which may obstruct flight patterns to instrument approach airports must follow Federal Aviation Administration guidelines in designing intermediate and final grades;

4.5.7.g. 4.5.g.7. A permittee storing waste must provide a sufficient number of



containers to contain solid waste generated during periods between regularly scheduled collections;

~~4.5.7.h.~~ 4.5.g.8. An individual container or bulk container used for the storage of solid waste must have the following characteristics:

~~4.5.7.h.A.~~ 4.5.g.8.A. The container must be constructed to be easily handled for collection; and

~~4.5.7.h.B.~~ 4.5.g.8.B. The container must be corrosion resistant and compatible with waste to be stored;

~~4.5.7.i.~~ 4.5.g.9. An individual container or bulk container used for the storage of putrescible solid waste must also have the following characteristics:

~~4.5.7.i.A.~~ 4.5.g.9.A. The container must be equipped with a tight fitting lid or cover, or otherwise sealed; and

~~4.5.7.i.B.~~ 4.5.g.9.B. The container must be watertight, leak proof, insect proof, and rodent proof; and

~~4.5.7.j.~~ 4.5.g.10. A permittee that stores waste outside of containers must tie the wastes securely in bundles of a size that can be readily handled for collection, and in a manner that minimizes litter, safety hazards, and fire hazards.

#### 4.6. General Operational Requirements.

##### ~~4.6.1.~~ 4.6.a. General Requirements.

~~4.6.1.a.~~ 4.6.a.1. No person may operate or maintain a solid waste facility after the effective date of this rule that does not conform to an approved plan of operation and the following:

~~4.6.1.a.A.~~ 4.6.a.1.A. Daily deposition of solid waste must be confined to as

small an area as practical;

~~4.6.1.a.B.~~ 4.6.a.1.B. Provisions must be made to confine windblown material within the active disposal area;

~~4.6.1.a.C.~~ 4.6.a.1.C. At the conclusion of each day of operation, all windblown material must be collected and properly disposed of in the active disposal area in accordance with the provisions of ~~section~~ subdivision 4.6.1 4.6.a of this rule, unless the operator establishes, to the satisfaction of the director, that:

~~4.6.1.a.C.(a)~~ 4.6.a.1.C.(a) All windblown material cannot be collected using reasonable efforts because of conditions beyond the control of the operator;

~~4.6.1.a.C.(b)~~ 4.6.a.1.C.(b) Windblown material which can be collected using a reasonable effort has been collected and disposed of properly;

~~4.6.1.a.D.~~ 4.6.a.1.D. Putrescible materials such as spoiled foods and animal carcasses must be immediately compacted and covered by the use of daily cover and other means;

~~4.6.1.a.E.~~ 4.6.a.1.E. Permittees of all SWLFs must control public access and prevent unauthorized vehicular traffic through the use of artificial barriers, including fencing, natural barriers, both, or other methods approved in writing by the director, as appropriate to protect human health and the environment;

~~4.6.1.a.F.~~ 4.6.a.1.F. Procedures for Excluding the Receipt of Regulated Hazardous Waste.

~~4.6.1.a.F.(a)~~ 4.6.a.1.F.1. The application must contain an operator implemented program at the facility to detect and prevent attempts to dispose of hazardous wastes



(regulated under Subtitle C of RCRA and defined in ~~Part 161 of Chapter 40 of the CFR 40CFR161~~) and polychlorinated biphenyls (PCB) wastes at the facility (regulated under the Toxic Substances Control Act, and as defined in ~~Part 161 of Chapter 40 40CFR161~~, or as reflected in ~~Chapter 22, Article 18 W. Va. Code §22-18-1 et seq.~~)

~~4.6.1.a.F.(b)~~ 4.6.a.1.F.2.

Measures that solid waste facility operators must incorporate in their programs to exclude receipt of hazardous waste, include at a minimum:

~~4.6.1.a.F.(b)(A)~~

4.6.a.1.F.2.(a) Random inspections of incoming loads, inspection of suspicious loads, recordkeeping of inspection results (including date, time, name of the hauling firm, driver, source of waste, vehicle identification numbers, and all observations made by the inspector), training of personnel to recognize hazardous waste, and procedures for notifying proper Division authorities if a regulated hazardous waste is found at the facility unless the permittee takes other steps approved by the director in writing to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;

~~4.6.1.a.F.(b)(B)~~

4.6.a.1.F.2.(b) Records of any inspections, activities and information must be reported on a form prescribed by the director and copies of these inspection records and all related information must be retained in the SWLF's operating record.

~~4.6.1.a.F.(b)(C)~~

4.6.a.1.F.2.(c) Training of facility personnel to recognize regulated hazardous waste and PCB wastes. These records must be maintained in the SWLFs operating record; and

~~4.6.1.a.F.(e)~~ 4.6.a.1.F.3.

Procedures for providing written notification to the director as required under Subtitle C of RCRA, or applicable rules and regulations

promulgated under W. Va. Code §22-18-1 et seq., if a regulated hazardous waste or PCB waste is discovered at the facility.

~~4.6.1.a.G.~~ 4.6.a.1.G.

Effective means must be taken to limit and control public access and prevent illegal dumping of wastes at the active disposal area to minimize exposure of the public to hazards;

~~4.6.1.a.H.~~ 4.6.a.1.H.

Effective means, including the use of daily cover, must be taken to prevent or control on-site populations of disease vectors, including flies, rodents, other insects, vermin and other organisms capable of directly or indirectly transmitting infectious diseases or pathogenic organisms from one person to another, or from an animal to a person, using techniques appropriate for the protection of human health and the environment.

~~4.6.1.a.I.~~ 4.6.a.1.I.

Equipment must be provided, and daily cover material made available, to control accidental fires. Also, arrangements must have been made previously with the local fire protection agency to utilize their services when needed;

~~4.6.1.a.J.~~ 4.6.a.1.J.

An attendant must be on duty at the facility at all times while it is open for public use;

~~4.6.1.a.K.~~ 4.6.a.1.K.

A gate must be provided at the entrance to the operation and it must be kept locked when an attendant is not on duty;

~~4.6.1.a.L.~~ 4.6.a.1.L.

The gate area must be policed at the beginning of each day of operation to remove any solid waste which has been indiscriminately dumped during periods when the facility was closed;

~~4.6.1.a.M.~~ 4.6.a.1.M.

A sign, acceptable to the director, must be posted at the entrance of any facility operated for public use which indicates the facility name, permit number,

the hours that solid waste is received, the hours of operation, including hours for exempt disposal of solid waste, waste types accepted, penalties for unauthorized use, necessary safety precautions, and any other pertinent information. Such signs must be posted and maintained for the duration of the active life of the SWLF, be clearly visible, readable, and uniform throughout the operation, be permanently fixed, and made of durable material;

~~4.6.1.a.N.~~ 4.6.a.1.N. The facility must be surrounded with rapidly growing trees, shrubbery, fencing, berms, or other appropriate means to screen it from the surrounding area and to provide a wind break;

~~4.6.1.a.O.~~ 4.6.a.1.O. Means acceptable to the director must be taken to control dust resulting from facility operation;

~~4.6.1.a.P.~~ 4.6.a.1.P. Daily cover must be applied to the active disposal area to control the prohibited act of scavenging;

~~4.6.1.a.Q.~~ 4.6.a.1.Q. All burning is prohibited in accordance with statutes, rules and regulations of the West Virginia Office of Air Quality;

~~4.6.1.a.Q.(a)~~ 4.6.a.1.Q.1. All open burning of solid waste, except for the infrequent burning of land clearing debris, diseased trees, or debris from emergency clean-up operations, except as approved by the Office of Air Quality is prohibited at all SWLFs.

~~4.6.1.a.R.~~ 4.6.a.1.R. Provisions must be made for backup equipment in the event of operating equipment breakdown;

~~4.6.1.a.S.~~ 4.6.a.1.S. All topsoil within the facility construction limits must be salvaged and stored within the property boundaries for use in facility closure. All stockpiled soil material which is not anticipated to be used within six (6) months must be seeded; and

~~4.6.1.a.T.~~ 4.6.a.1.T. All access roads to the active area of the operation must be maintained in good condition so as to prevent sedimentation of drainage ways.

~~4.6.2.~~ 4.6.b. Solid Waste Placement.

~~4.6.2.a.~~ 4.6.b.1. Solid Waste Placement and Compaction.

~~4.6.2.a.A.~~ 4.6.b.1.A. Working Faces.

Solid waste must be placed for disposal only at designated working faces. Working face width must be minimized and must not exceed one hundred (100) feet unless otherwise approved by the director. The slopes of working faces must not exceed thirty-three and one-third percent (33 1/3%). To prevent lateral migration of leachate through the final cover, all daily and intermediate cover from each lift of solid waste within twenty-five (25) feet of the final cover must be removed.

~~4.6.2.a.B.~~ 4.6.b.1.B. Daily Cell Height.

Daily cell height must not exceed eight (8) feet in the vertical dimension except in the middle area of the daily cell to divert stormwater. The vertical dimension of the middle area of the daily cell must not exceed eleven (11) feet.

~~4.6.2.a.C.~~ 4.6.b.1.C. Layering and Compaction.

Solid waste must be placed in layers not exceeding two (2) feet in depth and compacted with a minimum of three (3) passes with an 815 Caterpillar compactor or other equipment of equivalent compacting ability, or as otherwise approved by the director.

~~4.6.2.b.~~ 4.6.b.2. Cover Material Application.

~~4.6.2.b.A.~~ 4.6.b.2.A. Daily

Cover.

Except as provided in ~~section subparagraph 4.6.2.b.B~~ 4.6.b.2.B, the permittee of all SWLFs must cover the entire exposed solid waste disposal area with a minimum thickness of six inches of compacted cover material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.

~~4.6.2.b.A.(a)~~ 4.6.b.2.A.1.

Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the director if the permittee demonstrates in writing that the alternative material and thickness does, or will control disease vectors, fires, odors, windblown material, and scavenging and does not present a threat to human health and the environment.

~~4.6.2.b.A.(b)~~ 4.6.b.2.A.2. The director may grant a temporary waiver from the requirement of ~~sections subparagraph 4.6.2.b.A~~ 4.6.b.2.A and ~~part 4.6.2.b.A.(a)~~ 4.6.b.2.A.1. if the permittee demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

~~4.6.2.b.B:~~ 4.6.b.2.B. Intermediate Cover.

Solid waste fill surfaces which will remain exposed to weather for periods in excess of thirty (30) days must have a minimum of twelve (12) inches of compacted cover material applied within thirty (30) days of completion of the fill surface.

~~4.6.2.b.C:~~ 4.6.b.2.C. Final Cover.

Solid waste fill surfaces which will receive no further solid waste deposits must place final cover in accordance with ~~section subparagraph 6.1.5.a.A~~ 6.1.e.1.A of this rule.

~~4.6.2.b.D:~~ 4.6.b.2.D. Availability.

Cover material must be available from the facility site or other designated sources in sufficient quantities to provide:

~~4.6.2.b.D.(a)~~ 4.6.b.2.D.1. Six (6) inches of compacted daily cover material.

~~4.6.2.b.D.(b)~~ 4.6.b.2.D.2. Twelve (12) inches of compacted intermediate cover material.

~~4.6.2.b.D.(e)~~ 4.6.b.2.D.3. Sufficient cover material, as required in ~~part paragraph 4.6.2.b~~ 4.6.b.2 and section 6 of this rule.

~~4.6.2.e:~~ 4.6.b.3. Waste Placement in Winter.

For the installation of all liners, a layer of waste at least four (4) feet thick, or an adequate amount of other frost protection material, must be placed over the granular blanket in all portions of the lined area prior to December 31 of the same year of the liner was constructed. Waste must not be placed during the winter on any portion of the liner not having a four (4) foot thick layer of waste or other adequate frost protection material covering it after December 31 of each year. Those portions of the liner must be investigated for density and effects from freeze-thaw as specified by the director and must be repaired and recertified during the next construction season if required, prior to additional waste placement. These requirements may be waived by the director upon the request of the permittee.

4.7. Acceptable and Unacceptable Wastes.

~~4.7.1:~~ 4.7.a. Acceptable Wastes.

Landfills may receive the following types of solid wastes, as authorized by the facility's permit, or by written permission of the director that such waste is acceptable:

~~4.7.1.a:~~ 4.7.a.1. Agricultural waste;

~~4.7.1.b.~~ 4.7.a.2. Commercial waste;

~~4.7.1.c.~~ 4.7.a.3. Compost;

~~4.7.1.d.~~ 4.7.a.4. Construction waste;

~~4.7.1.e.~~ 4.7.a.5. Debris;

~~4.7.1.f.~~ 4.7.a.6. Demolition waste;

~~4.7.1.g.~~ 4.7.a.7. Discarded material;

~~4.7.1.h.~~ 4.7.a.8. Garbage;

~~4.7.1.i.~~ 4.7.a.9. Household waste;

~~4.7.1.j.~~ 4.7.a.10. Industrial waste;

~~4.7.1.k.~~ 4.7.a.11. Inert waste;

~~4.7.1.l.~~ 4.7.a.12. Municipal solid waste;

~~4.7.1.m.~~ 4.7.a.13. Non-municipal incinerator ash;

~~4.7.1.n.~~ 4.7.a.14. Putrescible waste;

~~4.7.1.o.~~ 4.7.a.15. Refuse;

~~4.7.1.p.~~ 4.7.a.16. Residential waste;

~~4.7.1.q.~~ 4.7.a.17. Rubbish;

~~4.7.1.r.~~ 4.7.a.18. Scrap metal;

~~4.7.1.s.~~ 4.7.a.19. Sludge;

~~4.7.1.t.~~ 4.7.a.20. Trash;

~~4.7.1.u.~~ 4.7.a.21. Bulky goods;

~~4.7.1.v.~~ 4.7.a.22. Other materials approved by the director; and

~~4.7.1.w.~~ 4.7.a.23. Properly treated infectious wastes.

~~4.7.2.~~ 4.7.b. Unacceptable wastes.

Landfills may not receive the following wastes under any conditions, unless otherwise approved by the director:

~~4.7.2.a.~~ 4.7.b.1. Free liquids;

~~4.7.2.b.~~ 4.7.b.2. Regulated hazardous wastes;

~~4.7.2.c.~~ 4.7.b.3. Unstabilized sewage sludge or sludges that have not been dewatered, or contain less than 20% solids by weight;

~~4.7.2.d.~~ 4.7.b.4. Pesticide containers that have not been triple rinsed and crushed;

~~4.7.2.e.~~ 4.7.b.5. Drums that are not empty and not crushed, except as provided under ~~section paragraph 4.13.5.a~~ 4.13.e.1 of this rule;

~~4.7.2.f.~~ 4.7.b.6. Waste which may be infectious waste, or is recognizable treated noninfectious medical waste, as defined in section 2 of this rule, must be labeled prior to being transported off-site. Treated medical waste that will pass through a screen with a one-half inch (½") grid is not considered recognizable. The label must be sized and attached in the manner required by ~~Section subdivision 6.3.1~~ 6.3.a of Title 46, CSR Series 56 ~~64CSR56~~ for infectious medical waste unless:

~~4.7.2.f.A.~~ 4.7.b.6.A. The waste was generated by a household or by an individual during self-care or self-treatment; or

~~4.7.2.f.B.~~ 4.7.b.6.B. The waste has not been compacted and is accompanied by a label, manifest, or shipping document which:

~~4.7.2.f.B.(a)~~ 4.7.b.6.B.1. Identifies the generator of the waste by name, address and business telephone number of the generator;

~~4.7.2.f.B.(b)~~ 4.7.b.6.B.2.

Identifies the name, address and business telephone number of the generator of the facility at which the waste was rendered noninfectious;

~~4.7.2.f.B.(c)~~ 4.7.b.6.B.3.

Identifies the amount of waste rendered noninfectious by weight, volume, or number of containers, and the method of treatment;

~~4.7.2.f.B.(d)~~ 4.7.b.6.B.4.

Includes a signed and dated certification by the facility at which the waste was rendered noninfectious that states: "I hereby certify under penalty of law that this waste has been rendered noninfectious in accordance with procedures required by Infectious Medical Waste, Title 46, CSR Series 56 64CSR56"; and

~~4.7.2.f.B.(e)~~ 4.7.b.6.B.5.

Maintained on file at the municipal solid waste facility receiving that waste for final disposal, with the exception that labels permanently attached to the waste are not required to be maintained on file.

~~4.7.3.~~ 4.7.c. Wastes Acceptable under Certain Conditions.

~~4.7.3.a:~~ 4.7.c.1. The waste has been rendered noninfectious. Certifications establishing the wastes as noninfectious must be maintained for a period of three (3) years at the facility receiving the waste for disposal.

~~4.7.3.b:~~ 4.7.c.2. Waste containing PCBs at concentrations of fifty parts per million (50 ppm) or greater;

~~4.7.3.c:~~ 4.7.c.3. Municipal incinerator ash, except as provided under ~~section~~ subdivision ~~4.13.10~~ 4.13.j of this rule; or

~~4.7.3.d:~~ 4.7.c.4. Petroleum-contaminated soils, except as provided under ~~section~~ subdivision ~~4.13.11~~ 4.13.k of this rule.

## 4.8. Leachate Management.

~~4.8.1.~~ 4.8.a. General Requirements.

~~4.8.1.a:~~ 4.8.a.1. Leachate must be removed from all collection tanks, manholes, lift stations, sumps, or other structures used for solid waste leachate storage as often as necessary to allow for gravity drainage of leachate from the facility at all times.

~~4.8.1.b:~~ 4.8.a.2. Any liquid which comes in contact with waste or accumulates in a portion of the facility where active waste disposal operations are occurring must be handled as leachate and properly treated as specified in ~~section~~ subsection 4.8 of this rule unless otherwise approved by the director in writing.

~~4.8.1.c:~~ 4.8.a.3. All leachate collection and detection lines must be cleaned with a water jet cleanout device or equivalent immediately after construction, after the first layer of waste has been placed over an entire phase and annually thereafter.

~~4.8.1.d:~~ 4.8.a.4. Except as otherwise provided in ~~sections~~ paragraph ~~4.8.1.e~~ 4.8.a.5 through ~~4.8.1.f~~ 4.8.a.6 of this rule, leachate must be collected, treated, and then directly discharged into a POTW or other treatment facility permitted by the Division. In addition, the operator must operate a leachate treatment facility as provided in ~~section~~ paragraph ~~4.8.1.g~~ 4.8.a.7 of this rule within three (3) years following the detection of leachate in the collection or handling system, unless otherwise approved by the director. In the case of an industrial solid waste landfill, the leachate collection and treatment facility must be in place and operable prior to the commencement of landfill operations.

~~4.8.1.e:~~ 4.8.a.5. Leachate may be collected, treated on-site, and then discharged into a receiving stream under a permit issued by the Division under W. Va. Code §22-11-1 et seq., and the rules and regulations promulgated thereunder,

if the director approves this method in the solid waste facility permit issued under this rule. On-site treatment and discharge to a receiving stream will not be allowed unless direct discharge into a POTW or other permitted facility is not reasonably possible.

~~4.8.1.f.~~ 4.8.a.6. Except for industrial solid waste landfills, leachate may be collected, treated on-site, and then be applied to land via spray irrigation on a temporary basis if the director approves this method in the solid waste facility permit issued under this rule. On-site treatment and subsequent land application will not be allowed unless, at a minimum:

~~4.8.1.f.A.~~ 4.8.a.6.A. Discharge into a POTW or other permitted treatment facility is not possible;

~~4.8.1.f.B.~~ 4.8.a.6.B. Discharge of the treated leachate into a receiving stream in a manner consistent with W. Va. Code §22-11-1 et seq., and the rules and regulations promulgated thereunder, is not attainable; and

~~4.8.1.f.C.~~ 4.8.a.6.C. Temporary spray irrigation is approved in the municipal solid waste facility permit issued under this rule.

~~4.8.1.g.~~ 4.8.a.7. Except for industrial solid waste landfills, for the first three (3) years following initial discharge of leachate into the collection and handling system, but not thereafter unless otherwise approved by the director, leachate may be handled by vehicular transportation to and leachate treatment at an off-site treatment facility. The continued use of vehicular transportation of leachate to an off-site treatment facility will not be allowed unless, at a minimum, one of the following applies:

~~4.8.1.g.A.~~ 4.8.a.7.A. If the director determines that a direct discharge into a POTW or other permitted treatment facility is not reasonably attainable; and

~~4.8.1.g.B.~~ 4.8.a.7.B. If the director determines that a discharge of treated leachate into a receiving stream in a manner consistent with W. Va. Code §22-11-1 et seq., and the rules promulgated thereunder, is not attainable without potential degradation of the receiving stream within three (3) years.

~~4.8.1.h.~~ 4.8.a.8. If a permittee using vehicular transportation to and treatment at an off-site treatment facility loses the ability to dispose of leachate at that facility and is unable to secure an alternative off-site treatment facility acceptable to the director within fifteen (15) days from loss of its approved treatment facility, implementation of the treatment plan required by section paragraph 4.8.1.f. 4.8.a.6 of this rule must begin immediately. This leachate treatment system must be completed and operational by the date on which off-site treatment becomes unavailable.

~~4.8.1.i.~~ 4.8.a.9. Except for industrial solid waste landfills, in conjunction with any of the treatment methods in section subdivision 4.8.1. 4.8.a of this rule, the temporary recirculation of leachate may be utilized if the following conditions exist:

~~4.8.1.i.A.~~ 4.8.a.9.A. The area subject to leachate recirculation previously has been filled with solid waste;

~~4.8.1.i.B.~~ 4.8.a.9.B. There is sufficient waste capacity to absorb the leachate;

~~4.8.1.i.C.~~ 4.8.a.9.C. The area subject to leachate recirculation is underlain by a leachate collection system; and

~~4.8.1.i.D.~~ 4.8.a.9.D. Leachate recirculation is conducted with a piping system approved by the director located under the intermediate cover and causes no odors, runoff, or ponding.

~~4.8.1.j.~~ 4.8.a.10. The permittee must immediately notify the director and describe



remedial steps to be taken if:

~~4.8.1.j.A.~~ 4.8.a.10.A. Operation of the leachate treatment facility under this rule cannot prevent the facility from:

~~4.8.1.j.A.(a)~~ 4.8.a.10.A.1. Violating the terms of its permit, this rule, the Clean Water Act and the rules and regulations promulgated thereunder, or W. Va. Code §22-11-1 et seq. and the rules and regulations promulgated thereunder; or

~~4.8.1.j.A.(b)~~ 4.8.a.10.A.2. Causing surface water pollution or groundwater degradation, contamination, or pollution;

~~4.8.1.j.B.~~ 4.8.a.10.B. The facility is generating a quality or quantity of leachate that exceeds the design capacity of the treatment system;

~~4.8.1.j.C.~~ 4.8.a.10.C. For leachate treatment plans that include vehicular transportation of leachate to an off-site treatment plant, the total flow of leachate from the solid waste facility exceeds thirty thousand (30,000) gallons in a period of thirty (30) consecutive days;

~~4.8.1.j.D.~~ 4.8.a.10.B. The contractual agreement for leachate treatment by an off-site treatment system is breached or expired; or

~~4.8.1.j.E.~~ 4.8.a.10.E. The quality or quantity of solid waste being disposed at the facility changes from that set forth in the permit.

~~4.8.2.~~ 4.8.b. Leachate Treatment System, Design, and Construction.

~~4.8.2.a.~~ 4.8.b.1. Tanks, containers, and impoundments for storing leachate at a solid waste facility before or during treatment must be constructed and lined in accordance with ~~sections~~ subdivisions ~~4.8.2~~ 4.8.b and ~~4.8.3~~ 4.8.c of this rule.

~~4.8.2.b.~~ 4.8.b.2. A leachate treatment system must contain impoundments or tanks, for the storage of leachate prior to its treatment to effluent standards, that have a flow equalization and surge capacity equal to at least thirty (30) days of the leachate production estimated from the facility.

~~4.8.2.c.~~ 4.8.b.3. Impoundments or tanks must be aerated as necessary to prevent and control odors.

~~4.8.2.d.~~ 4.8.b.4. The storage capacity of impoundments and tanks at a facility must be increased prior to each major phase of construction and as otherwise necessary.

~~4.8.2.e.~~ 4.8.b.5. Necessary collection and containment systems must be installed prior to the deposition of solid waste at the facility. A treatment or handling system approved by the director must be installed prior to the storage or disposal of solid waste.

~~4.8.2.f.~~ 4.8.b.6. Construction of the leachate treatment facility and associated works must be supervised by a registered professional engineer. At the completion of construction of the facility, or at the completion of a modification to the capacity or treatment technique at the facility, the operator must submit to the director a certification under the seal of a registered professional engineer that the work was completed in accordance with the plans and designs in the operator's permit.

~~4.8.2.g.~~ 4.8.b.7. A modification to a leachate treatment system must be completed within one (1) year after construction is initiated, unless the director specifies a shorter period of time in the permit modification.

~~4.8.3.~~ 4.8.c. Liquid Storage.

~~4.8.3.a.~~ 4.8.c.1. Aboveground and Onground Tank Requirements.



~~4.8.3.a.A.~~ 4.8.c.1.A. Tanks may be constructed of concrete, steel, or other material approved by the director. Tanks must be designed to prevent structural failure and be supported on a well-drained stable foundation which prevents movement, rolling, or settling of the tank.

~~4.8.3.a.A.(a)~~ 4.8.c.1.A.1. Bottoms of steel tanks that rest on earthen material must be cathodically protected with either sacrificial anodes or an impressed current system which is designed, fabricated, and installed in accordance with the approved engineering report.

~~4.8.3.a.A.(b)~~ 4.8.c.1.A.2. The exterior surfaces of all aboveground and onground steel storage tanks must be protected by a primer coat, a bond coat, and two (2) or more final coats of paint or have at least an equivalent surface coating system designed to prevent corrosion and deterioration.

~~4.8.3.a.A.(c)~~ 4.8.c.1.A.3. The interior of all aboveground and onground tanks must consist of a material or must be lined with a material compatible to the liquid being stored.

~~4.8.3.a.B.~~ 4.8.c.1.B. All aboveground and onground tanks must have a secondary containment system which may consist of dikes, liners, pads, ponds, impoundments, curbs, ditches, sumps or other systems capable of containing the liquid stored.

~~4.8.3.a.B.(a)~~ 4.8.c.1.B.1. The design volume for the secondary containment system must be one hundred and ten percent (110%) of the volume of either the largest tank within the containment system or the total volume of all interconnected tanks, whichever is greater.

~~4.8.3.a.B.(b)~~ 4.8.c.1.B.2. The secondary containment system must be constructed of a material compatible with the liquid stored. The containment system must be constructed of either:

~~4.8.3.a.B.(b)-(A)~~

4.8.c.1.B.2.(a) A minimum one (1) foot layer of compacted soil with a maximum permeability of  $1 \times 10^{-7}$  centimeters per second;

~~4.8.3.a.B.(b)-(B)~~

4.8.c.1.B.2.(b) A concrete pad of a sufficient thickness to maintain integrity for the lifetime of the tank with a corrosion resistant coating; or

~~4.8.3.a.B.(b)-(C)~~

4.8.c.1.B.2.(c) A geosynthetic liner of a minimum thickness equal to sixty (60) mils.

~~4.8.3.a.B.(c)~~ 4.8.c.1.B.3. A system must be designed to contain and remove storm water from the secondary containment area. Provisions must be included for the removal of any accumulated precipitation (rain, snow or ice) and be initiated within twenty-four (24) hours or when ten percent (10%) of the storage capacity is reached; whichever occurs first. Disposal must be in compliance with W. Va. Code §§22-11-1 et seq., 22-15-1 et seq. and 22-12-1 et seq., and all applicable federal and state statutes, rules and regulations.

~~4.8.3.a.C.~~ 4.8.c.1.C. All aboveground and onground tanks must be equipped on the tank's discharge side with an overfill prevention system which may include, but not be limited to: level sensors and gauges, high level alarms or automatic shutoff controls. The overfill control equipment must be inspected weekly by the facility operator to ensure it is in good working order.

~~4.8.3.a.D.~~ 4.8.c.1.D. The exposed exterior of all aboveground and onground tanks must be inspected weekly by the facility operator for adequacy of the cathodic protection system, leaks, corrosion, and maintenance deficiencies. Interior inspection of tanks must be performed whenever the tank is drained. If the inspection reveals a tank or equipment deficiency, leak or any other deficiency which could result in failure of the tank to contain the liquid, remedial

measures must be taken immediately to eliminate the leak or correct the deficiency. Inspection reports must be maintained and made available to the director upon request for the lifetime of the liquid storage system.

~~4.8.3.a.E.~~ 4.8.c.1.E. All uncovered tanks must have a minimum two (2) feet freeboard. Odor and vector control must be practiced when necessary.

~~4.8.3.b.~~ 4.8.c.2. Underground Tank Requirements.

~~4.8.3.b.A.~~ 4.8.c.2.A. Underground tank systems including tanks and piping must be placed a minimum of two (2) feet above the seasonally high groundwater table and a minimum of two (2) feet vertical separation must be maintained between bedrock and the lowest point of the tank. The tank system must be installed in accordance with manufacturer installation instructions.

~~4.8.3.b.B.~~ 4.8.c.2.B. Tank systems may be constructed of fiberglass reinforced plastic, steel that is cathodically protected and coated with a suitable dielectric material; steel that is clad with fiberglass, or any other materials approved by the director.

~~4.8.3.b.C.~~ 4.8.c.2.C. The secondary containment and a continuous leak detection system must be installed in the form of a double-walled tank, designed as an integral structure so that any release from the inner tank is completely contained by the outer shell.

~~4.8.3.b.C.(a)~~ 4.8.c.2.C.1. The interstitial space must be monitored at least once per week by the facility operator for tightness using pressure monitoring, vacuum monitoring, electronic monitoring or an approved equivalent method.

~~4.8.3.b.C.(b)~~ 4.8.c.2.C.2. Any tank system vulnerable to corrosion must be

protected from both corrosion of the primary tank interior and the external surface of the outer shell.

~~4.8.3.b.C.(b)(A)~~  
4.8.c.2.C.2.(a) All resistant coatings applied to the primary tank interior must be chemically compatible with the liquid to be stored.

~~4.8.3.b.C.(b)(B)~~  
4.8.c.2.C.2.(b) All cathodic protection systems must be tested within six (6) months of installation and at least every three (3) years thereafter unless otherwise specified by the director. A deficiency in the cathodic protection system must be corrected upon discovery.

~~4.8.3.b.D.~~ 4.8.c.2.D. All underground tanks must be equipped with an overfill prevention system which may include but not be limited to: level sensors and gauges, high level alarms, or automatic shutoff controls. The overfill control equipment must be inspected weekly by the facility operator to ensure it is in good working order.

~~4.8.3.b.E.~~ 4.8.c.2.E. Inspection and leak detection monitoring reports must be maintained and made available upon request for the lifetime of the liquid storage system.

~~4.8.3.c.~~ 4.8.c.3. Surface Impoundment Requirements.

~~4.8.3.c.A.~~ 4.8.c.3.A. Any surface impoundment must be constructed a minimum of five (5) feet above the seasonally high groundwater table. A minimum of four (4) feet vertical separation must be maintained between the base of the constructed liner and bedrock. Any surface impoundment that meets the definition of a "dam" found in W.Va. Code §22-14-3 ~~of the Code of W. Va.~~ must first obtain a certificate of approval for a dam before a solid waste facility permit can be approved under this rule.

~~4.8.3.c.B.~~ 4.8.c.3.B. Surface

impoundments subject to this rule must be constructed with a liner system consisting of a minimum of two (2) liners and a leak detection system. Surface impoundments currently in use that do not have liners and a leak detection system as prescribed in section paragraph 4.8.3.e 4.8.c.3 of this rule must either be closed or retrofitted to conform to this section subparagraph within six (6) months following the effective date of this rule. Liner construction must include the following:

4.8.3.e.B.(a) 4.8.c.3.B.1. The top liner must be a synthetic liner with a minimum thickness equal to sixty (60) mils. A protective cover must be placed over this liner to prevent damage during clean-out operations.

4.8.3.e.B.(b) 4.8.c.3.B.2. A leak detection and removal system must be installed between the two (2) synthetic liners.

4.8.3.e.B.(c) 4.8.c.3.B.3. The lower composite liner must consist of a minimum of two (2) feet of compacted clay with a maximum permeability of  $1 \times 10^{-7}$  centimeters per second overlain by a synthetic liner that is at least sixty (60) mils thick.

4.8.3.e.B.(d) 4.8.c.3.B.4. Quality assurance and quality control testing must be performed by the project engineer in conformance with the requirements identified in section subdivision 4.5.5 4.5.e of this rule.

4.8.3.e.C. 4.8.c.3.C. A minimum of two (2) feet of freeboard must be maintained in all surface impoundments. Odor and vector control must be practiced when necessary.

4.8.3.e.D. 4.8.c.3.D. A minimum of three (3) groundwater monitoring wells, one upgradient and two (2) downgradient of any surface impoundment may be required to be installed and sampled at the discretion of the director in accordance with this rule.

4.8.3.d. 4.8.c.4. Closure of Liquid Storage Facilities.

4.8.3.d.A. 4.8.c.4.A. The permittee or operator of the liquid storage facility must prepare a written closure plan for the liquid storage facility and submit the plan with the permit application for the solid waste management facility.

4.8.3.d.B. 4.8.c.4.B. The permittee or operator must complete closure activities in accordance with the approved closure plan and within one hundred eighty (180) days after liquid collection has ceased.

4.8.3.d.C. 4.8.c.4.C. At closure, all liquid and solid waste must be removed from the tank or surface impoundment, connecting lines, and any associated secondary containment systems. All solid waste removed must be properly handled and disposed of in conformance with the provisions of the Act and applicable federal and state requirements. All connecting lines must be disconnected and securely capped or plugged.

4.8.3.d.C.(a) 4.8.c.4.A.1. Underground tanks must be removed or thoroughly cleaned to remove traces of waste and all accumulated sediments and then filled to capacity with a solid inert material, such as clean sand or concrete slurry. If groundwater is found to be contaminated from the tank, the tank and surrounding contaminated soil must be removed and appropriately disposed. Other corrective actions to remediate the contaminant plume may be required by the director.

4.8.3.d.C.(b) 4.8.c.4.A.2. Accessways to aboveground and onground tanks must be securely fastened in place to prevent unauthorized access. Tanks must either be stenciled with the date of permanent closure or removed. The secondary containment system must be perforated to provide for drainage.

~~4.8.3.d.C.(e)~~ 4.8.c.4.A.3. For surface impoundments, all waste residues, contaminated system components (e.g., liners) contaminated subsoils, structures, and equipment contaminated with waste must be removed and appropriately disposed. If the groundwater surrounding the impoundment is contaminated, other corrective actions to remediate a contaminant plume may be required by the director. If the groundwater surrounding the impoundment is found not to be contaminated, the liner system may remain in place if drained, cleaned to remove all traces of waste, and both liners punctured so that drainage is allowed. The impoundment must be backfilled and regraded to the surrounding topography.

#### 4.8.4. 4.8.d. Leachate Analysis.

The permittee must comply with the following sampling requirements at all monitoring points of the leachate collection and detection system as prescribed by the director:

~~4.8.4.a.~~ 4.8.d.1. On a daily basis, the flow rate and volume of flowing liquids from the leachate collection and detection systems must be determined; and

~~4.8.4.b.~~ 4.8.d.2. On a quarterly basis, the chemical composition of the leachate flowing into the leachate treatment system must be determined through the analysis of the leachate for the parameters listed in Appendix I, or as specified by the facility permit, or order of the director must be conducted.

#### 4.9. Water Quality Standards.

All permittees are required under the provisions of W. Va. Code §22-11-1 et seq. and the rules promulgated thereunder to comply with all applicable water quality standards.

#### 4.10. Landfill Gas Management.

Decomposition gases generated within a

landfill must be controlled to avoid hazards to health, safety, or property. Measures to control decomposition gases must be undertaken in accordance with the following requirements:

#### ~~4.10.1.~~ 4.10.a. Explosive Gases Control.

~~4.10.1.a.~~ 4.10.a.1. Effective means must be utilized by the permittee to prevent the migration of explosive gases generated in any facility structure, and to ensure that:

~~4.10.1.a.A.~~ 4.10.a.1.A. The concentration of methane or other explosive gases generated by the facility, including the waste fill, or any facility structure (excluding the leachate collection system or gas control or recovery system components) or in the soils or air at or beyond the facility property boundary does not exceed 25 percent (25%) of the lower explosive limit for methane or other such explosive gases, in facility structures.

~~4.10.1.a.B.~~ 4.10.a.1.B. The concentration of methane and other explosive gases does not exceed the lower explosive detection limit for methane or other explosive gases at the facility property boundary.

#### ~~4.10.2.~~ 4.10.b. Gas Monitoring Program.

Permittees of all SWLFs must implement an ongoing (routine) explosive gas monitoring program to ensure that the standards of ~~section~~ subdivision ~~4.10.1~~ 4.10.a of this rule are met. The type and frequency of monitoring must be approved by the director and be based on the following factors:

~~4.10.2.a.~~ 4.10.b.1. Soil conditions;

~~4.10.2.b.~~ 4.10.b.2. Hydrogeologic conditions surrounding the facility, including the disposal area;

~~4.10.2.c.~~ 4.10.b.3. The hydraulic conditions surrounding the facility, including the

disposal site; and

~~4.10.2.d.~~ 4.10.b.4. The location of the any manmade or other facility structures and property boundaries.

~~4.10.2.e.~~ 4.10.b.5. The minimum frequency of monitoring must be quarterly.

~~4.10.3.~~ 4.10.c. Notification.

Upon detection of methane or other explosive gas levels exceeding the limits specified in section subdivision 4.10.1 4.10.a of this rule, the landfill owner and the appropriate officials identified in the contingency plan must:

~~4.10.3.a.~~ 4.10.c.1. Immediately take all necessary steps to ensure the safety and protection of human health and must immediately notify the director, and

~~4.10.3.b.~~ 4.10.c.2. Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and

~~4.10.3.c.~~ 4.10.c.3. Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the director that the plan has been implemented.

~~4.10.3.d.~~ 4.10.c.4. The plan must describe the nature and extent of the problem and the proposed remedy.

~~4.10.3.e.~~ 4.10.c.5. The director may establish alternative schedules for demonstrating compliance with sections paragraphs 4.10.3.b 4.10.c.2, 4.10.3.c 4.10.c.3, and 4.10.3.d 4.10.c.4.

4.11. Groundwater Monitoring and Corrective Action Program.

~~4.11.1.~~ 4.11.a. Groundwater Monitoring Program.

The groundwater sampling and analysis requirements for the groundwater monitoring system are as follows:

~~4.11.1.a.~~ 4.11.a.1. Groundwater Sampling and Analysis Requirements.

The groundwater monitoring program submitted by the permittee must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of the groundwater quality at the background and downgradient wells installed in compliance with section paragraph 3.8.4.a 3.8.d.1 after approval by the director. The permittee must retain a copy in the operating record. At a minimum, the program must include procedures and techniques for:

~~4.11.1.a.A.~~ 4.11.a.1.A. Sample collection;

~~4.11.1.a.B.~~ 4.11.a.1.B. Sample preservation and shipment;

~~4.11.1.a.C.~~ 4.11.a.1.C. Analytical procedures;

~~4.11.1.a.D.~~ 4.11.a.1.D. Chain of custody control; and

~~4.11.1.a.E.~~ 4.11.a.1.E. Quality assurance and quality control.

~~4.11.1.b.~~ 4.11.a.2. The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measures hazardous constituents and other monitoring parameters in groundwater samples. The sampling and analysis methods must follow the approved quality assurance/quality control plan, and the director will require resampling if he or she believes the samples were not properly sampled or analyzed.

~~4.11.1.b.A.~~ 4.11.a.2.A.



Groundwater samples must not be field-filtered prior to laboratory analysis, except when monitoring for dissolved metals.

~~4.11.1.e.~~ 4.11.a.3. The permittee must determine groundwater flow rate and direction of groundwater in the uppermost significant aquifer at least annually.

~~4.11.1.e.A.~~ 4.11.a.3.A. The sampling procedures and frequency must be protective of human health and the environment.

~~4.11.1.d.~~ 4.11.a.4. The permittee must establish background groundwater quality for each of the monitoring parameters of constituents required in the particular groundwater monitoring program that applies to the facility, as determined by the Phase I, or Phase II monitoring program. The minimum number of samples used to establish background groundwater quality must be consistent with the appropriate statistical procedures as specified in ~~section paragraph 4.11.1.g~~ 4.11.a.7 of this rule.

~~4.11.1.e.~~ 4.11.a.5. Background quality at existing facilities may be based on sampling of wells that are not upgradient from the waste management area where:

~~4.11.1.e.A.~~ 4.11.a.5.A. Hydrogeologic conditions do not allow the permittee to determine what wells are upgradient; and

~~4.11.1.e.B.~~ 4.11.a.5.B. Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells.

~~4.11.1.e.C.~~ 4.11.a.5.C. Groundwater elevations must be measured in each well immediately prior to purging, each time groundwater is sampled.

~~4.11.1.e.D.~~ 4.11.a.5.D. The

permittee must determine the rate and direction of groundwater flow each time groundwater is sampled.

~~4.11.1.e.E.~~ 4.11.a.5.E. Groundwater elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

~~4.11.1.e.F.~~ 4.11.a.5.F. The sampling procedures must be those specified under ~~section paragraph 4.11.2.b~~ 4.11.b.2 for Phase I Detection Monitoring, ~~sections paragraphs 4.11.3.b 4.11.c.2 and 4.11.3.e~~ 4.11.c.3 for Phase II Assessment Monitoring, and ~~section subdivision 4.11.5~~ 4.11.e for corrective action.

~~4.11.1.f.~~ 4.11.a.6. The permittee must determine whether there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined for Phase I and Phase II monitoring programs. The permittee must make these statistical determinations each time he or she assesses groundwater quality.

~~4.11.1.f.A.~~ 4.11.a.6.A. In determining whether a statistically significant increase has occurred, the permittee must compare the groundwater quality at each monitoring well at the waste management boundary for each parameter or constituent to the background value for that parameter or constituent, according to the statistical procedures.

~~4.11.1.f.B.~~ 4.11.a.6.B. The permittee must determine whether there has been a statistically significant increase at each monitoring well at the facility boundary immediately after completion of sampling.

~~4.11.1.g.~~ 4.11.a.7. The permittee

must employ one of the following statistical procedures in combination with the designated sampling requirement to determine a statistically significant increase. The permittee must specify in the operating record which one of the statistical methods was used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen must be conducted separately for each hazardous constituent in each well.

~~4.11.1.g.A.~~ 4.11.a.7.A. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure or methods must include estimation and testing of the contrasts between each compliance (downgradient) well's mean and the background mean levels for each constituent.

~~4.11.1.g.B.~~ 4.11.a.7.B. An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure or method must include estimation and testing of the contrasts between each compliance (downgradient) well's mean and the background mean levels for each constituent.

~~4.11.1.g.C.~~ 4.11.a.7.C. A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit, or

~~4.11.1.g.D.~~ 4.11.a.7.D. A control chart approach that gives control limits for each constituent.

~~4.11.1.g.E.~~ 4.11.a.7.E. Another statistical test method that meets the performance standards of ~~section~~ subparagraph 4.11.1.i.D 4.11.a.9.D may be utilized, provided that:

~~4.11.1.g.E.(a)~~ 4.11.a.7.E.1.

The permittee must place a justification for this alternative in the operating record and notify the director of the use of this alternative test; and

~~4.11.1.g.E.(b)~~ 4.11.a.7.E.1.

The justification must demonstrate that the alternative method meets the performance standards of ~~section~~ paragraph 4.11.1.i 4.11.a.9.

~~4.11.1.h.~~ 4.11.a.8. The director may establish an alternative sampling procedure and statistical test for any of the constituents listed in Appendix I or II of this rule, as required to protect human health and the environment. Factors to consider for establishing this alternative statistical procedure include:

~~4.11.1.h.A.~~ 4.11.a.8.A. If the distributions for different constituents differ, more than one procedure may be needed. The permittee must show that the normal distribution is not appropriate if using a nonparametric or other methodology not requiring an assumption of normality. For any statistic not based on a normal distribution, a goodness of fit test must be conducted to demonstrate that the normal distribution is not appropriate. Other tests must be conducted to demonstrate that the assumptions of the statistic or distribution are not grossly isolated;

~~4.11.1.h.B.~~ 4.11.a.8.B. Each parameter or constituent must be tested for separately. Each time that a test is done, the test for individual constituents must be done at a type I error level no less than 0.01. A multiple comparison procedure may be used at a type I experiment-wide error rate no less than 0.05. The owner or operator must evaluate the ability of the method to detect contamination that is actually present and may be required to increase the sample size to achieve an acceptable error level;

~~4.11.1.h.C.~~ 4.11.a.8.C. The statistical procedure must be appropriate for the behavior of the parameters or constituents



involved. It must include methods for handling data below the limit of detection. The permittee must evaluate different ways of dealing with values below the limit of detection and choose the one that is most protective of human health and the environment. In cases where there are a high proportion of values below limits of detection, the permittee may demonstrate that an alternative procedure is more appropriate; and

4.11.1.i.D. 4.11.a.8.D. The statistical procedure used must account for seasonal and spatial variability and temporal correlation.

4.11.1.i. 4.11.a.9. If contamination is detected by any of the statistical tests, and the director or permittee suspects that detection is an artifact caused by some feature of the data other than contamination, the director may specify that statistical tests of trend, seasonal variation, autocorrelation, or other interfering aspects of the data be done to establish whether the significant result is indicative of detection of contamination or resulted from natural variation.

4.11.1.i.A. 4.11.a.9.A. The permittee must determine whether there is a statistically significant increase (or decrease, in the case of Phase I) over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the landfill, as determined under section paragraph 4.11.2.a 4.11.b.1 or 4.11.3.a 4.11.c.1 of this rule. The permittee must make these statistical determinations each time he or she assesses groundwater quality at the landfill.

4.11.1.i.B. 4.11.a.9.B. In determining whether a statistically significant increase or decrease has occurred, the permittee must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to section subparagraph 3.8.4.a.3 3.8.d.1.J to the background value of that parameter or constituent, according to the statistical procedures specified under section

subsection 4.11 of this rule.

4.11.1.i.C. 4.11.a.9.C. Within a reasonable time period after completing sampling and analysis as determined by the director, the permittee must determine whether there has been a statistically significant increase over background at each monitoring well.

4.11.1.i.D. 4.11.a.9.D. Any statistical method chosen under section paragraph 4.11.1.g 4.11.a.7 must comply with the following performance standards, as appropriate:

4.11.1.i.D.(a) 4.11.a.9.D.1. The statistical method used to evaluate groundwater monitoring data must be appropriate for the distribution of chemical parameters or hazardous constituents.

4.11.1.i.D.(b) 4.11.a.9.D.2. If the distribution of the chemical parameters or hazardous constituents is shown by the permittee to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used.

4.11.1.i.D.(c) 4.11.a.9.D.3. If the distributions for the constituents differ, more than one statistical method may be needed.

4.11.1.i.E. 4.11.a.9.E. If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test must be done at a Type I error level no less than 0.01 for each testing period.

4.11.1.i.E.(a) 4.11.a.9.E.1. If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period must be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained.

4.11.1.i.E.(b) 4.11.a.9.E.2.

This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

4.11.1.i.F. 4.11.a.9.F. If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values must be protective of human health and the environment.

4.11.1.i.F.(a) 4.11.a.9.F.1.

The parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

4.11.1.i.G. 4.11.a.9.G. If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, and must be protective of human health and the environment.

4.11.1.i.G.(a) 4.11.a.9.G.1.

These parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

4.11.1.i.H. 4.11.a.9.H. The statistical method must account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment.

4.11.1.i.H.(a) 4.11.a.9.H.1.

Any practical quantitation limit (pql) that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility, as must be a concentration level less than the mcl referenced in

Appendix III to this rule.

4.11.1.i.I. 4.11.a.9.I. If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

4.11.1.j. 4.11.a.10. Once established at a SWLF, groundwater monitoring must be conducted throughout the active life and post-closure care period of that SWLF as specified in section 6 of this rule.

4.11.1.k. 4.11.a.11. The permittee may request the director to establish an alternative schedule(s) for demonstrating compliance with ~~section~~ subdivision 3-8-4 3.8.d, pertaining to notification of placement of certification in the operating record; ~~section~~ subdivisions 4-11-2, 4.11.b pertaining to notification that statistically significant increase (SSI) notice is in the operating record; ~~sections~~ subdivision 4-11-2 4.11.b and paragraph 4-11-3-b 4.11.c.2, pertaining to an assessment monitoring program; ~~section~~ subdivision 4-11-3 4.11.c, pertaining to sampling and analyzing Appendix II constituents; ~~section~~ subparagraph 4-11-3-d-B, 4.11.c.4.B pertaining to placement of notice (Appendix II constituents detected) in the operating record and notification of notice in the operating record; ~~section~~ paragraph 4-11-3-g 4.11.c.7, pertaining to sampling for Appendix I and II to this part; ~~section~~ paragraph 4-11-3-g 4.11.c.7, pertaining to notification (and placement of notice in operating record) of SSI above groundwater protection standard; ~~sections~~ subdivisions 4-11-5 4.11.e and 4-11-6 4.11.f, pertaining to assessment of corrective measures; ~~section~~ subdivision 4-11-7 4.11.g, pertaining to selection of remedy and notification of placement in the operating record; ~~section~~ subdivision 4-11-7, 4.11.g pertaining to notification of placement in the operating record (alternative corrective action measures); and ~~section~~ subdivision 4-11-7 4.11.g, pertaining to notification of placement in the operating record (certification of remedy completed).

~~4.11.2.~~ 4.11.b. Phase I Detection Monitoring Program.

~~4.11.2.a.~~ 4.11.b.1. Program Requirements.

A Phase I Detection Monitoring Program is required for all groundwater monitoring wells at all landfills and solid waste disposal surface impoundments except as otherwise provided in this rule and in ~~section subdivision 4.11.3~~ 4.11.c of this rule.

~~4.11.2.b.~~ 4.11.b.2. At a minimum, a Phase I detection monitoring program for commercial solid waste facilities shall include the monitoring parameters listed in Appendix I, or as specified in the facility permit, or order of the director. For Class F solid waste facilities, the ~~chief director~~ shall specify in the permit those parameters to be included in a Phase I monitoring program as appropriate for the types of waste to be disposed in a particular solid waste facility or which are reasonably expected to be present. Such proposed monitoring parameters shall be submitted to the ~~chief director~~ as part of the permit application process. For coal combustion by-product facilities, the monitoring parameters shall consist of some combination of the following: pH, temperature, alkalinity, hardness, total dissolved solids, total suspended solids, specific conductance, total organic carbon, calcium, magnesium, sodium, iron, manganese, aluminum, chloride, sulfate, arsenic, copper, nickel, selenium, zinc, barium, mercury, total and hexavalent chromium, lead, boron, molybdenum, cadmium, and vanadium.

~~4.11.2.b.A.~~ 4.11.b.2.A. The director may delete any of the Appendix I monitoring parameters for a SWLF if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the SWLF.

~~4.11.2.b.B.~~ 4.11.b.2.B. The director may establish an alternative list of

inorganic indicator parameters for a SWLF, in lieu of some or all of the heavy metals (constituents in Appendix I to this rule), if the alternative parameters provide a reliable indication of inorganic releases from the SWLF to the groundwater.

~~4.11.2.b.B.(a)~~ 4.11.b.2.B.1. In determining alternative parameters, the director may consider the following factors:

~~4.11.2.b.B.(a)(A)~~  
4.11.b.2.B.1.(a) The types, quantities, and concentrations of constituents in waste managed at the SWLF;

~~4.11.2.b.B.(a)(B)~~  
4.11.b.2.B.1.(b) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the SWLF;

~~4.11.2.b.B.(a)(C)~~  
4.11.b.2.B.1.(c) The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and

~~4.11.2.b.B.(a)(D)~~  
4.11.b.2.B.1.(d) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

~~4.11.2.c.~~ 4.11.b.3. Phase I Sampling and Analysis Procedures.

~~4.11.2.c.A.~~ 4.11.b.3.A. The monitoring frequency for all constituents listed in Appendix I of this rule, must be at least twice a year during the active life of the facility, including closure and the post-closure periods. The director may require more frequent monitoring on a site-specific basis by considering aquifer flow rate and existing quality of the groundwater.

~~4.11.2.c.B.~~ 4.11.b.3.B. A minimum of four independent samples from each well (background and downgradient) must be

collected and analyzed in accordance with ~~section subparagraph 4.11.2.b.B~~ 4.11.b.2.B, during the first semiannual sampling event.

~~4.11.2.e.C:~~ 4.11.b.3.C. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semiannual sampling events.

~~4.11.2.e.D:~~ 4.11.b.3.D. The director may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with ~~section subparagraph 4.11.2.b.B~~ 4.11.b.2.B, during the active life (including closure) and the post-closure care period.

~~4.11.2.e.E:~~ 4.11.b.3.E. The alternative frequency during the active life (including closure) must be no less than annual.

~~4.11.2.e.F:~~ 4.11.b.3.F. The alternative frequency must be based on consideration of the following factors:

~~4.11.2.e.F.(a)~~ 4.11.b.3.F.1. Lithology of the aquifer and unsaturated zone;

~~4.11.2.e.F.(b)~~ 4.11.b.3.F.2. Hydraulic conductivity of the aquifer and unsaturated zone;

~~4.11.2.e.F.(c)~~ 4.11.b.3.F.3. Groundwater flow rates;

~~4.11.2.e.F.(d)~~ 4.11.b.3.F.4. Minimum distance between upgradient edge of the SWLF and downgradient monitoring well screen (minimum distance of travel); and

~~4.11.2.e.F.(e)~~ 4.11.b.3.F.(e). Resource value of the aquifer.

~~4.11.2.d:~~ 4.11.b.4. Unless otherwise directed by the director, if the permittee determines, pursuant to this rule, that there is a

statistically significant increase over background for one or more of the constituents listed in Appendix I to this rule, or in the alternative list approved in accordance with ~~section subparagraph 4.11.2.b.B~~ 4.11.b.2.B, Phase I parameter at the boundary specified under ~~sections subparagraph 3.8.4.a-J~~ 3.8.d.1.J the permittee must:

~~4.11.2.d.A:~~ 4.11.b.4.A. Within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the director that this notice was placed in the operating record;

~~4.11.2.d.B:~~ 4.11.b.4.B. Within a thirty-day period, repeat the sampling of the groundwater in all appropriate monitoring wells as approved by the director, and determine the concentration of all constituents designated under ~~section paragraph 4.11.2.b~~ 4.11.b.2 of this rule that are present in the groundwater; and

~~4.11.2.d.C:~~ 4.11.b.4.C. If the repeat sampling indicates that no statistically significant increase over background levels has occurred, continue monitoring at the Phase I level; or

~~4.11.2.d.D:~~ 4.11.b.4.D. If the repeat sampling confirms that a statistically significant increase over background levels has occurred, establish a Phase II assessment monitoring program meeting the requirements of ~~section subdivision 4.11.3~~ 4.11.c of ~~these regulations~~ this rule within ninety 90 days of confirmation, except as provided for in ~~section paragraph 4.11.2.e~~ 4.11.b.3.

~~4.11.2.e:~~ 4.11.b.5. Other Source Determination.

~~4.11.2.e.A:~~ 4.11.b.5.A. The permittee may demonstrate that a source other than a SWLF caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation,

or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist approved by the director and be placed in the operating record.

~~4.11.2.e.B:~~ 4.11.b.5.B. If the director agrees that a successful demonstration has been made and documented, the permittee may continue Phase I Detection Monitoring as specified in this ~~section~~ subparagraph.

~~4.11.2.e.C:~~ 4.11.b.5.C. If, after 90 days, a successful demonstration has not been made, the permittee must initiate a Phase II Assessment Monitoring Program as required in ~~section~~ subdivision ~~4.11.3~~ 4.11.c.

~~4.11.3:~~ 4.11.c. Phase II Assessment Monitoring Program.

~~4.11.3.a:~~ 4.11.c.1. A Phase II assessment monitoring program is required whenever statistically significant increases over background have been detected between background and downgradient monitoring wells for one or more constituent listed in Appendix I or in the alternative list approved by the director in accordance with ~~section~~ subparagraph ~~4.11.2.b.B~~ 4.11.2.b.B.

~~4.11.3.b:~~ 4.11.c.2. Phase II Sampling and Analysis Procedures.

A Phase II monitoring program must include quarterly monitoring of all constituents identified in Appendix II of this rule in addition to specified Phase I parameters, or in the case of Class F solid waste facilities, those specified by the director unless waived by the director upon request of the permittee.

~~4.11.3.b.A:~~ 4.11.c.2.A. Within 90 days of triggering an assessment monitoring program, and annually thereafter, the permittee must sample and analyze the groundwater for all constituents identified in Appendix II of this rule.

~~4.11.3.b.B:~~ 4.11.c.2.B. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event.

~~4.11.3.b.C:~~ 4.11.c.2.C. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for new constituents.

~~4.11.3.b.D:~~ 4.11.c.2.D. The director may specify an appropriate subset of wells to be sampled and analyzed for Phase II constituents during assessment monitoring.

~~4.11.3.b.E:~~ 4.11.c.2.E. The director may delete any of the Phase II monitoring parameters for a SWLF if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the SWLF.

~~4.11.3.b.F:~~ 4.11.c.2.F. For those Phase II constituents that are determined to be below the detectable limits of the standard analytical methods, the director may reduce the required monitoring frequency. In no case may the monitoring frequency be less than once per year.

~~4.11.3.b.G:~~ 4.11.c.2.G. If the permittee finds no Phase II constituent in groundwater during the initial sampling made pursuant to a Phase II assessment monitoring program, the permittee may petition the director for a reinstatement of the Phase I monitoring program. Within ninety (90) days of the receipt of such a petition, the director may either approve or deny the petition and notify the permittee of the decision in writing.

~~4.11.3.e:~~ 4.11.c.3. The director may specify an appropriate alternative frequency for repeated sampling and analysis for the full set of



Appendix II constituents required by ~~section paragraph 4.11.3.b~~ 4.11.c.2 of this rule, during the active life (including closure) and post-closure care of the SWLF considering the following factors:

~~4.11.3.e.A:~~ 4.11.c.3.A. Lithology of the aquifer and unsaturated zone;

~~4.11.3.e.B:~~ 4.11.c.3.B. Hydraulic conductivity of the aquifer and unsaturated zone;

~~4.11.3.e.C:~~ 4.11.c.3.C. Groundwater flow rates;

~~4.11.3.e.D:~~ 4.11.c.3.D. Minimum distance between upgradient edge of the SWLF and downgradient monitoring well screen (minimum distance of travel);

~~4.11.3.e.E:~~ 4.11.c.3.E. Resource value of the aquifer; and

~~4.11.3.e.F:~~ 4.11.c.3.F. Nature (fate and transport) of any constituents detected in response to this ~~section subparagraph~~.

~~4.11.3.d:~~ 4.11.c.4. After obtaining the results from the initial or subsequent sampling events required in ~~section paragraph 4.11.3.b~~ 4.11.c.2, the permittee must, within 14 days, place a notice in the operating record identifying the Phase II constituents that have been detected and notify the director that this notice has been placed in the operating record;

~~4.11.3.d.B:~~ 4.11.c.4.B. Required Permittee Resampling Procedures for Phase II Events.

~~4.11.3.d.B.(a)~~ 4.11.c.4.B.1. Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by ~~section subdivision 3-8.4 3.8.d~~ the permittee must conduct analyses for all constituents in Appendix I to this rule or in the alternative list approved in accordance with ~~section subdivision 4.11.2~~ 4.11.b

and for those constituents in Appendix II to this rule that are detected in response to ~~section paragraph 4.11.2-e~~ 4.11.b.3 and record their concentrations in the facility operating record.

~~4.11.3.d.B.(b)~~ 4.11.c.4.B.2. At least one sample of each well (background and downgradient) must be collected and analyzed during these sampling events.

~~4.11.3.d.B.(c)~~ 4.11.c.4.B.3. The director may specify an alternative monitoring frequency during the active life (including closure) and post-closure period for the constituents referred to in this ~~section part~~.

~~4.11.3.d.B.(d)~~ 4.11.c.4.B.4. The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with ~~section subparagraph 4.11.2.b.B~~ 4.11.b.2.B, during the active life (including closure) must be no less than annual.

~~4.11.3.d.B.(e)~~ 4.11.c.4.B.5. The alternative frequency must be based on consideration of the factors specified in ~~section paragraph 4.11.3-e~~ 4.11.c.3.

~~4.11.3.d.C:~~ 4.11.c.4.C. Establish background concentrations for any constituents detected pursuant to ~~section paragraph 4.11.3.b~~ 4.11.c.2 or ~~4.11.3.d~~ 4.11.c.4, and

~~4.11.3.d.D:~~ 4.11.c.4.D. Groundwater Protection Standards.

~~4.11.3.d.D.(a)~~ 4.11.c.4.D.1. Establish groundwater protection standards for all constituents detected pursuant to ~~section paragraph 4.11.3.b~~ 4.11.3.b or ~~4.11.3.d~~ 4.11.3.d.

~~4.11.3.d.D.(b)~~ 4.11.c.4.D.2. The groundwater protection standards must be established in accordance with ~~section paragraph 4.11.3-h~~ 4.11.c.8 or ~~4.11.3-i~~ 4.11.c.9.

~~4.11.3.e:~~ 4.11.c.5. If the

concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in sections paragraphs 4.11.1.g 4.11.a.7 and 4.11.1.h 4.11.a.8 of this rule, for two consecutive sampling events, the permittee must notify the director of this finding and may return to Phase I detection monitoring.

4.11.3.f. 4.11.c.6. If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under section paragraph 4.11.3.h 4.11.c.8, or 4.11.3.i 4.11.c.9, using the statistical procedures in sections paragraphs 4.11.1.g 4.11.a.7 and 4.11.1.h 4.11.a.8 of this rule, the permittee must continue assessment monitoring in accordance with this section paragraph.

4.11.3.g. 4.11.c.7. Statistically Significant Level Above Groundwater Protection Standards.

4.11.3.g.A. 4.11.c.7.A. If one or more Appendix II constituents are detected at statistically significant levels above groundwater protection standard established under section paragraph 4.11.3.h 4.11.c.8, or 4.11.3.i 4.11.c.9, in any sampling event, the permittee must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded the groundwater protection standard and notify the director and all appropriate local government officials that the notice has been placed in the operating record. The permittee must also:

4.11.3.g.A.(a) 4.11.c.7.A.1. Characterize the nature and extent of the release by installing additional monitoring wells as necessary;

4.11.3.g.A.(b) 4.11.c.7.A.2. Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with section subparagraph 4.11.3.d.B

4.11.c.4.B;

4.11.3.g.A.(c) 4.11.c.7.A.3. Notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with section paragraph 4.11.3.g 4.11.c.7; and

4.11.3.g.A.(d) 4.11.c.7.A.4. Initiate an assessment of corrective measures as required by section subdivision 4.11.5 4.11.e of this rule within 90 days; or

4.11.3.g.B. 4.11.c.7.B. Other Source of Statistically Significant Increase (SSI) Determination.

4.11.3.g.B.(a) 4.11.c.7.B.1. The permittee may demonstrate that a source other than a SWLF caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

4.11.3.g.B.(b) 4.11.c.7.B.2. A report documenting this demonstration must be certified by a qualified groundwater scientist and approved by the director of an approved state and placed in the operating record.

4.11.3.g.B.(c) 4.11.c.7.B.3. If the director agrees that a successful demonstration has been made the permittee must continue monitoring in accordance with the assessment (Phase II) monitoring program pursuant to section subdivision 4.11.3 4.11.c, and may return to Phase I detection monitoring if the Phase II constituents upon resampling are at or below background as specified in section paragraph 4.11.3.e. 4.11.c.5.

4.11.3.g.B.(d) 4.11.c.7.B.4. Until the director agrees that a successful demonstration has been made, the permittee must continue to comply with section paragraph 4.11.3.g 4.11.c.7 including initiating an



assessment of corrective measures.

4.11.3.h. 4.11.c.8. Establishment of Groundwater Protection Standards.

4.11.3.h.A. 4.11.c.8.A. The permittee must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater.

4.11.3.h.B. 4.11.c.8.B. The groundwater protection standard must be as follows:

4.11.3.h.B.(a) 4.11.c.8.A.1. For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under ~~40 CFR Part 141~~ 40CFR141, or ~~46 CSR 12~~ 64CSR12, the MCL for that constituent;

4.11.3.h.B.(b) 4.11.c.8.B.2. For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with ~~section subdivision 3-8.4~~ 3.8.d; or

4.11.3.h.B.(c) 4.11.c.8.B.3. For constituents for which the background level is higher than the MCL identified under ~~section paragraph 4.11.3.h 4.11.c.8~~, or health-based levels, identified under ~~section paragraph 4.11.3.i, 4.11.c.9~~ for the background concentration.

4.11.3.i. 4.11.c.9. Alternative Groundwater Protection Standards.

4.11.3.i.A. 4.11.c.9.A. The director may consider an alternative groundwater protection standard in consultation with the environmental water quality board ~~pursuant to 47 CSR 57~~ for constituents for which water quality standards have not been established.

4.11.3.i.B. 4.11.c.9.B. These

groundwater protection standards must be appropriate health-based levels that satisfy the following criteria:

4.11.3.i.C. 4.11.c.9.C. The level is derived in a manner consistent with EPA guidelines for assessing the health risks of environmental pollutants (51 CFR 33992, 34006, 34014, 34028, September 24, 1986);

4.11.3.i.D. 4.11.c.9.D. The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act, Good Laboratory Practice Standards (~~40 CFR Part 792~~) (40CFR792) or equivalent;

4.11.3.i.E. 4.11.c.9.E. For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  range; and

4.11.3.i.F. 4.11.c.9.F. Systemic Toxicants.

4.11.3.i.F.(a) 4.11.c.9.F.1. For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime.

4.11.3.i.F.(b) 4.11.c.9.F.2. For purposes of this ~~section part~~, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

4.11.3.j. 4.11.C.10. In establishing groundwater protection standards under ~~section paragraph 4.11.3.i. 4.11.c.9~~, the director may consider the following:

4.11.3.j.A. 4.11.C.10.A. Multiple contaminants in the groundwater;

4.11.3.j.B. 4.11.C.10.B. Exposure

threats to sensitive environmental receptors; and

~~4.11.3-j.C. 4.11.C.10.C.~~ Other site-specific exposure or potential exposure to groundwater.

~~4.11.4. 4.11.d.~~ (Reserved)

~~4.11.5. 4.11.e.~~ Assessment of Corrective Measures.

Whenever a statistically significant increase is found in a Phase II monitoring parameter, or when groundwater contamination is otherwise identified by the director at sites without monitoring programs, which is determined by the director to have resulted in a significant adverse effect on an aquifer, and which is attributable to a solid waste facility, the director may require appropriate corrective or remedial action pursuant to ~~WV W.Va. Code Chapter §§22, Articles 11, and 12 and Chapter 22, Article 15~~ to abate, remediate or correct such pollution. Any such corrective or remedial action order must take into account any applicable groundwater quality protection standards and/or background groundwater quality, pursuant to the requirements of the Groundwater Protection Act, ~~WVC Chapter 22, Article 15, section 1~~ §22-12-1 et seq., the existing use of such waters, the reasonable uses of such waters, background water quality, and the protection of human health and the environment.

~~4.11.5.a. 4.11.e.1.~~ Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under ~~section paragraph 4.11.3-h 4.11.c.8 or 4.11.3-i 4.11.c.9~~ of this rule, the permittee must initiate an assessment of corrective measures.

~~4.11.5.a.A. 4.11.e.1.A.~~ Such an assessment must be completed within a period of time as agreed to in writing by the director.

~~4.11.5.b. 4.11.e.2.~~ The permittee

must continue to monitor in accordance with the assessment monitoring program as specified in ~~section subdivision 4.11.3 4.11.c.~~

~~4.11.5.c. 4.11.e.3.~~ The assessment must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under ~~section subdivision 4.11.6 4.11.f,~~ addressing at least the following:

~~4.11.5.c.A. 4.11.e.3.A.~~ The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

~~4.11.5.c.B. 4.11.e.3.B.~~ The time required to begin and complete the remedy;

~~4.11.5.c.C. 4.11.e.3.C.~~ The costs of remedy implementation; and

~~4.11.5.c.D. 4.11.e.3.D.~~ The institutional requirements such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(ies).

~~4.11.5.d. 4.11.e.4.~~ The permittee must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

~~4.11.6. 4.11.f.~~ Selection of Remedy.

~~4.11.6.a. 4.11.f.1.~~ Based on the results of the corrective measures assessment conducted under ~~section subdivision 4.11.5 4.11.e~~ the permittee must select a remedy that, at a minimum, meets the standards listed in ~~section paragraph 4.11.6.b 4.11.f.2.~~

~~4.11.6.a.A. 4.11.f.1.A.~~ The permittee must notify the director, within 14 days

of selecting a remedy, a report describing the selected remedy has been placed in the operating record and how it meets the standards in section paragraph 4.11.6.b 4.11.f.2.

4.11.6.b. 4.11.f.2. Remedies must:

4.11.6.b.A. 4.11.f.2.A. Be protective of human health and the environment and maintain existing groundwater quality, pursuant to the requirements of the Groundwater Protection Act, W. Va. Code §22-12-1 et seq.;

4.11.6.b.B. 4.11.f.2.B. Attain the groundwater protection standard as specified pursuant to sections paragraphs 4.11.3.h 4.11.c.8 or 4.11.3.i 4.11.c.9;

4.11.6.b.C. 4.11.f.2.C. Control the source(s) of releases so as to reduce or eliminate further releases of Appendix II constituents into the environment; and

4.11.6.b.D. 4.11.f.2.D. Comply with standards for management of wastes as specified in section paragraph 4.11.7.d 4.11.g.4.

4.11.6.e. 4.11.f.3. In selecting a remedy that meets the standards of section paragraph 4.11.6.b 4.11.f.2, the permittee must consider the following evaluation factors:

4.11.6.e.A. 4.11.f.3.A. The long and short-term effectiveness and protectiveness of the potential remedy(ies), along with the degree of certainty that the remedy(ies) will prove successful based on consideration of the following:

4.11.6.e.A.(a) 4.11.f.3.A.1.  
Magnitude of reduction of existing risks;

4.11.6.e.A.(b) 4.11.f.3.A.2.  
Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

4.11.6.e.A.(e) 4.11.f.3.A.3.

The type and degree of long-term management required, including monitoring, operation, and maintenance;

4.11.6.e.A.(d) 4.11.f.3.A.4.

Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and re-disposal of containment;

4.11.6.e.A.(e) 4.11.f.3.A.5.

Time until full protection is achieved;

4.11.6.e.A.(f) 4.11.f.3.A.6.

Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment;

4.11.6.e.A.(g) 4.11.f.3.A.7.

Long-term reliability of the engineering and institutional controls; and

4.11.6.e.A.(h) 4.11.f.3.A.8.

Potential need for replacement of the remedy.

4.11.6.e.B. 4.11.f.3.B. The

effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

4.11.6.e.B.(a) 4.11.f.3.B.1.

The extent to which containment practices will reduce further releases;

4.11.6.e.B.(b) 4.11.f.3.B.2.

The extent to which treatment technologies may be used;

4.11.6.e.C. 4.11.f.3.C. The ease

or difficulty of implementing a potential remedy(ies) based upon consideration of the following types of factors:

~~4.11.6.e.C.(a)~~ 4.11.f.3.C.1.

Degree of difficulty associated with constructing the technology;

~~4.11.6.e.C.(b)~~ 4.11.f.3.C.2.

Expected operational reliability of the technologies;

~~4.11.6.e.C.(c)~~ 4.11.f.3.C.3.

Need to coordinate with and obtain necessary approvals and permits from other agencies;

~~4.11.6.e.C.(d)~~ 4.11.f.3.C.4.

Availability of necessary equipment and specialists; and

~~4.11.6.e.C.(e)~~ 4.11.f.3.C.5.

Available capacity and location of needed treatment, storage, and disposal services.

~~4.11.6.e.D.~~ 4.11.f.3.D.

Practicable capability of the permittee, including a consideration of the technical and economic capability.

~~4.11.6.e.E.~~ 4.11.f.3.E. The degree to which community concerns are addressed by a potential remedy(ies).

~~4.11.6.d.~~ 4.11.f.4. The permittee must specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities.

~~4.11.6.d.A.~~ 4.11.f.4.A. Such a schedule must require the initiation of remedial activities within period of time agreed to in writing by the director, taking into consideration the factors set forth in ~~section paragraph~~ 4.11.6.d.4.11.f.4.

~~4.11.6.d.B.~~ 4.11.f.4.B. The permittee must consider the following factors in determining the schedule of remedial activities:

~~4.11.6.d.B.(a)~~ 4.11.f.4.B.1.

Extent and nature of contamination;

~~4.11.6.d.B.(b)~~ 4.11.f.4.B.2.

Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under ~~sections~~ paragraph ~~4.11.3.g~~ 4.11.c.7 or ~~4.11.3.h~~ 4.11.c.8 and other objectives of the remedy;

~~4.11.6.d.B.(c)~~ 4.11.f.4.B.3.

Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

~~4.11.6.d.B.(d)~~ 4.11.f.4.B.4.

Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

~~4.11.6.d.B.(e)~~ 4.11.f.4.B.5.

Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

~~4.11.6.d.B.(f)~~ 4.11.f.4.B.6.

The hydrogeologic characteristics of the facility and the surrounding land, and aquifer including:

~~4.11.6.d.B.(f)(A)~~

4.11.f.4.B.6.(a) Current and future uses;

~~4.11.6.d.B.(f)(B)~~

4.11.f.4.B.6.(b) Proximity and withdrawal rate of users;

~~4.11.6.d.B.(f)(C)~~

4.11.f.4.B.6.(c) Groundwater quantity and quality;

~~4.11.6.d.B.(f)(D)~~

4.11.f.4.B.6.(d) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent(s);

~~4.11.6.d.B.(f)(E)~~

4.11.f.4.B.6.(e) Groundwater removal and treatment costs; and

~~4.11.6.d.B.(f)(F)~~  
4.11.f.4.B.7. The cost and availability of alternative water supplies.

~~4.11.6.d.B.(g)~~ 4.11.f.4.B.7.  
 Practicable capability of the permittee.

~~4.11.6.d.B.(h)~~ 4.11.f.4.B.8.  
 Other relevant factors.

~~4.11.6.e.~~ 4.11.f.5. The director may determine that remediation of a release of an Appendix II constituent from a SWLF is not necessary if the permittee demonstrates to the satisfaction of the director that:

~~4.11.6.e.A.~~ 4.11.f.5.A. The groundwater is additionally contaminated by substances that have originated from a source other than a SWLF and those substances are present in concentrations such that cleanup of the release from the SWLF would provide no significant reduction in risk to actual or potential receptors; or

~~4.11.6.e.B.~~ 4.11.f.5.B. The constituent(s) is present in groundwater that:

~~4.11.6.e.B.(a)~~ 4.11.f.5.B.1. Is not currently or reasonably expected to be a source of drinking water; and

~~4.11.6.e.B.(b)~~ 4.11.f.5.B.2. Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under section paragraph 4.11.3.h 4.11.c.8 or 4.11.3.i 4.11.c.9; or

~~4.11.6.e.C.~~ 4.11.f.5.C. Remediation of the release(s) is technically impracticable; or

~~4.11.6.e.D.~~ 4.11.f.5.D. Remediation results in unacceptable cross-media impacts.

~~4.11.6.f.~~ 4.11.f.5. A determination by the director pursuant to section paragraph 4.11.6.e. 4.11.f.5 must not affect the authority of the state to require the permittee to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

~~4.11.7.~~ 4.11.g. Implementation of the Corrective Action Program.

~~4.11.7.a.~~ 4.11.g.1. Based on the schedule established under section paragraph 4.11.6.d 4.11.f.4 for initiation and completion of remedial activities the permittee must:

~~4.11.7.a.A.~~ 4.11.g.1.A. Establish and implement a corrective action groundwater monitoring program that:

~~4.11.7.a.A.(a)~~ 4.11.g.1.A.1. At a minimum, meet the requirements of an assessment monitoring program under section subdivision 4.11.3 4.11.c;

~~4.11.7.a.A.(b)~~ 4.11.g.1.A.2. Indicate the effectiveness of the corrective action remedy; and

~~4.11.7.a.A.(c)~~ 4.11.g.1.A.3. Demonstrate compliance with the Groundwater Protection Act, W. Va. Code §22-12-1 et seq., and/or the groundwater standard pursuant to section paragraph 4.11.7.e 4.11.g.5.

~~4.11.7.a.B.~~ 4.11.g.1.B. Implement the corrective action remedy selected under section subdivision 4.11.6 4.11.f; and

~~4.11.7.a.C.~~ 4.11.g.1.C. Take any interim measures necessary to ensure the protection of human health and the environment.

~~4.11.7.a.C.(a) 4.11.g.1.C.1.~~

Interim measures must, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to section paragraph 4.11.6 4.11.f.

~~4.11.7.a.C.(b) 4.11.g.1.C.2.~~

The following factors must be considered by a permittee in determining whether interim measures are necessary:

~~4.11.7.a.C.(b)(A)~~

4.11.g.1.C.2.(a) Time required to develop and implement a final remedy;

~~4.11.7.a.C.(b)(B)~~

4.11.g.1.C.2.(b) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

~~4.11.7.a.C.(b)(C)~~

4.11.g.1.C.2.(c) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

~~4.11.7.a.C.(b)(D)~~

4.11.g.1.C.2.(d) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

~~4.11.7.a.C.(b)(E)~~

4.11.g.1.C.2.(e) Weather conditions that may cause hazardous constituents to migrate or be released;

~~4.11.7.a.C.(b)(F)~~

4.11.g.1.C.2.(f) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

~~4.11.7.a.C.(b)(G)~~

4.11.g.1.C.2.(g) Other situations that may pose threats to human health and the environment.

4.11.7.b. 4.11.g.2. A permittee may

determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of section paragraph 4.11.6.b 4.11.f.2 are not being achieved through the remedy selected.

~~4.11.7.b.A. 4.11.g.2.A.~~

In such cases, the permittee must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the permittee makes the determination under section paragraph 4.11.7.e 4.11.g.3.

~~4.11.7.e. 4.11.g.3.~~

If the permittee determines that compliance with requirements under section paragraph 4.11.6.b 4.11.f.2 of this rule cannot be practically achieved with any currently available methods, the permittee must:

~~4.11.7.e.A. 4.11.g.3.A.~~

Obtain certification of a qualified groundwater scientist and approval by director that compliance with requirements under section paragraph 4.11.6.b 4.11.f.2 cannot be practically achieved with any currently available methods;

~~4.11.7.e.B. 4.11.g.3.B.~~

Implement alternative measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

~~4.11.7.e.C. 4.11.g.3.C.~~

Implement alternative measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

~~4.11.7.e.C.(a) 4.11.g.3.C.1.~~

Technically practicable; and

~~4.11.7.e.C.(b) 4.11.g.3.C.2.~~

Consistent with the overall objective of the remedy.

~~4.11.7.e.D. 4.11.g.3.D.~~

Notify the director within 14 days that a report justifying the



alternative measures prior to implementing the alternative measures has been placed in the operating record.

~~4.11.7.d. 4.11.g.4.~~ All solid wastes that are managed pursuant to a remedy required under ~~section subdivision 4.11.6 4.11.f~~, or an interim measure required under ~~section subparagraph 4.11.7.a.C 4.11.g.1.C~~ must be managed in a manner:

~~4.11.7.d.A. 4.11.g.4.A.~~ That is protective of human health and the environment; and

~~4.11.7.d.B. 4.11.g.4.B.~~ That complies with applicable RCRA requirements.

~~4.11.7.e. 4.11.g.5.~~ Remedies selected pursuant to ~~section subdivision 4.11.6 4.11.f~~ must be considered complete when:

~~4.11.7.e.A. 4.11.g.5.A.~~ The permittee complies with the groundwater protection standards established under ~~sections paragraph 4.11.3.h 4.11.c.8 or 4.11.3.i 4.11.c.9~~ at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under ~~section subdivision 3.8.4 3.8.4 and paragraph 3.8.4.a 3.8.4.a.~~

~~4.11.7.e.B. 4.11.g.5.B.~~ Compliance with the groundwater protection standards established under ~~section paragraph 4.11.3.h 4.11.c.8 or 4.11.3.i 4.11.c.9~~ have been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in ~~sections paragraphs 4.11.1.g 4.11.a.7 and 4.11.1.h 4.11.a.8~~ of this rule.

~~4.11.7.e.B.(a) 4.11.g.5.B.1.~~ The director may specify an alternative length of time during which the permittee must demonstrate that concentrations of Appendix II constituents

have not exceeded the groundwater protection standard(s) taking into consideration:

~~4.11.7.e.B.(a)(A)~~  
~~4.11.g.5.B.1.(a)~~ Extent and concentration of the release(s);

~~4.11.7.e.B.(a)(B)~~  
~~4.11.g.5.B.1.(b)~~ Behavior characteristics of the hazardous constituents in the groundwater;

~~4.11.7.e.B.(a)(C)~~  
~~4.11.g.5.B.1.(c)~~ Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

~~4.11.7.e.B.(a)(D)~~  
~~4.11.g.5.B.1.(d)~~ Characteristics of the groundwater.

~~4.11.7.e.C. 4.11.g.5.C.~~ All actions required to complete the remedy have been satisfied.

~~4.11.7.f. 4.11.g.6.~~ Upon completion of the remedy, the permittee must notify the director within 14 days that a certification that the remedy has been completed in compliance with the requirements of ~~section paragraph 4.11.7.e 4.11.g.5~~ has been placed in the operating record.

~~4.11.7.f.A. 4.11.g.6.A.~~ The certification must be signed by the permittee and by a qualified groundwater scientist and approved by the director.

~~4.11.7.g. 4.11.g.7.~~ When, upon completion of the certification, the director determines that the corrective action remedy has been completed in accordance with the requirements under ~~section paragraph 4.11.7.e 4.11.g.5~~, the permittee must be released from the requirements for financial assurance for corrective action under ~~section part 3.13.2.a.A.(e) 3.13.b.1.A.3.~~



#### 4.12. Reporting.

##### ~~4.12.1.~~ 4.12.a. Daily Logs.

Accurate, complete and true daily logs must be kept by the operator describing the type, amount, and origin of all solid waste received at the solid waste facility. These daily logs must be kept on file at the facility and include:

~~4.12.1.a.~~ 4.12.a.1. A description of waste handling problems or emergency disposal activities;

~~4.12.1.b.~~ 4.12.a.2. A record of deviations from the approved design or operational plans; and

~~4.12.1.c.~~ 4.12.a.3. A record of actions taken to correct violations of the Act, other state Acts, and the Division's rules and regulations.

~~4.12.2.~~ 4.12.b. Tonnage and Monitoring Reports.

~~4.12.2.a.~~ 4.12.b.1. Monthly Solid Waste Tonnage Reports.

~~4.12.2.a.A.~~ 4.12.b.1.A. Monthly solid waste tonnage reports describing the type, amount, and origin received at the solid waste facility for the month must be submitted to the director before the twentieth day of the following month.

~~4.12.2.a.B.~~ 4.12.b.1.B. The monthly tonnage report must also include results of the hazardous waste exclusion efforts as required by ~~section subparagraph 4.6.1.a.F~~ 4.6.a.1.F of this rule.

~~4.12.2.b.~~ 4.12.b.2. Groundwater Monitoring Reports.

~~4.12.2.b.A.~~ 4.12.b.2.A. The groundwater sampling analysis monitoring reports and accompanying report of determining whether

there was a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined for Phase I and Phase II monitoring programs, as required in ~~section subsection~~ 4.11 of this rule must be submitted with the monthly solid waste reports due before the twentieth day of April, July, October, and January.

~~4.12.2.c.~~ 4.12.b.3. Surface Water Monitoring Reports.

The surface water sampling analysis monitoring reports must be submitted as required by §22-11-1 et seq. and the rules promulgated thereunder.

~~4.12.2.c.~~ 4.12.b.3. Leachate Monitoring Reports.

The leachate sampling analysis monitoring reports must be submitted as required by §22-11-1 et seq. and the rules promulgated thereunder.

~~4.12.2.d.~~ 4.12.b.4. Reporting and Recordkeeping.

A copy of the monthly tonnage and the monitoring reports must also be sent to the county or regional solid waste authority for the county or counties in which the solid waste originated from. Copies of all of the reports required by this ~~section paragraph~~ must be kept on file at the solid waste facility.

~~4.12.3.~~ 4.12.c. Annual Operational Report.

An annual solid waste facility operational report must be submitted for the current calendar year to the director before January 31 of the following year.

~~4.12.3.a.~~ 4.12.c.1. The report must include:

~~4.12.3.a.A.~~ 4.12.c.1.A. Updated list of users of the facility;

~~4.12.3.a.B.~~ 4.12.c.1.B. Summary of the daily logs of solid waste received during the previous year;

~~4.12.3.a.C.~~ 4.12.c.1.C. Summary of the previous year's surface and groundwater monitoring activities; and

~~4.12.3.a.D.~~ 4.12.c.1.D. A brief narrative describing the status of development, construction, maintenance, expansion, and closure of all facilities or portion of facilities that are a part of the approved solid waste facility.

~~4.12.3.b.~~ 4.12.c.2. The annual solid waste facility operational report for landfills must also include:

~~4.12.3.b.A.~~ 4.12.c.2.A. A topographic map showing the permitted area, location of current working areas and completed areas in relationship to the grid system of the solid waste sequencing plan;

~~4.12.3.b.B.~~ 4.12.c.2.B. Cross-sections of the area that has been filled; and

~~4.12.3.b.C.~~ 4.12.c.2.C. Computations estimating the volume of the area that has been filled, and the volume of the remaining useful life of the facility, in months.

#### 4.13. Acceptance and Handling of Special Solid Wastes.

##### ~~4.13.1.~~ 4.13.a. General.

~~4.13.1.a.~~ 4.13.a.1. Except as expressly specified by an order or other written approval by the director, a solid waste facility may receive only those solid wastes allowed by its permit. Facilities may receive solid waste that requires special handling methods for processing or disposal only with express written approval of

the director, or by specific provisions within the facility permit. If it is not clear that a particular waste is within the authorized wastes that a permitted facility may receive, the permittee must request and receive a letter of permission from the director before receiving the waste.

~~4.13.1.b.~~ 4.13.a.2. Nothing must limit or affect the power of the director to prohibit or require special handling requirements determined to be necessary to protect the environment or the health, safety, and welfare of the public.

~~4.13.1.c.~~ 4.13.a.3. Special wastes such as discarded chemicals and pesticides not regulated as hazardous wastes, oil spill cleanup, underground storage site residues from cleanup, properly treated pesticide containers, and contaminated food products and fabrics requiring supervised disposal are examples of the type of special wastes for which approval by the director would be required before permitted solid waste management facilities could receive and dispose of the products.

~~4.13.1.c.A.~~ 4.13.a.3.A. Any analytical laboratory performing services for a special waste generator or a contractor under his or her employ must not profit from the treatment, removal or disposal of such waste, and must sign an affidavit stating such facts on a form provided by the director.

~~4.13.1.c.B.~~ 4.13.a.3.B. The permittee must provide a waste profile/chain of custody document to the director when requesting approval to dispose of any special waste at his/her commercial solid waste facility on forms provided by the director. Any solid waste landfill which is granted approval to accept special waste for disposal, such as petroleum contaminated soil for example must, at a minimum, maintain on-site at the facility a HNU Photoionizer, or equivalent, to monitor the levels of total organic volatiles (TOVs) present in soil being aerated to ensure that total TOVs are less than one hundred parts per million (100 ppm) prior to disposal of waste soil

in the landfill or for use of the soil as daily cover.

Note: The use of any trade name does not imply endorsement by the West Virginia Division of Environmental Protection.

~~4.13.2.~~ 4.13.b. Asbestos Wastes.

The permittee must ensure that every individual involved in the management of wastes is protected from exposure in conformance with the provisions of this rule and other applicable state and federal statutes, rules and regulations.

~~4.13.2.a.~~ 4.13.b.1. Packaging of Friable and Nonfriable Category II Asbestos Materials.

All solid wastes that may contain friable or nonfriable category II asbestos must be placed in double plastic bags and sealed or encased in two sealed layers of plastic wrap. Each bag or layer must be six (6) mils thick or greater and boldly marked "CAUTION: CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD." The name and address of the generator must also be marked on the container. Use of sealed cardboard containers or fiber drums may be required for dense waste or as extra protection against breaking of bags. Other special handling or packaging methods may be approved where equal environmental protection is, or will be achieved. Such alternative methods must only be considered where bagging, wrapping, or packaging is proven not to be possible.

~~4.13.2.b.~~ 4.13.b.2. Transportation of Friable Asbestos Materials for Disposal.

Properly packaged asbestos wastes must be transported in a closed conveyance with the crew segregated from the load. Asbestos waste must be accompanied by appropriate shipping papers to identify the waste, its origin, and its destination.

~~4.13.2.c.~~ 4.13.b.3. Disposal of Friable

and Nonfriable Asbestos Materials.

Asbestos waste must be disposed in a special purpose landfill or in a special area of a landfill, and must meet the following conditions:

~~4.13.2.c.A.~~ 4.13.b.3.A. Asbestos waste must be placed in a lined area designed and constructed to meet the minimum liner requirements set forth in section subdivision 5.4.2 5.4.b of this rule.

~~4.13.2.c.B.~~ 4.13.b.3.B. Asbestos waste must be hand placed in the trench or cell or by other means approved by the director which ensure integrity of bags, wrappings, or containers.

~~4.13.2.c.C.~~ 4.13.b.3.C. Asbestos waste must not be compacted until a sealing layer of soil has been placed over the waste and precautions are taken to prevent the breaking of bags or wrapping. All accidentally broken materials must be covered with twelve (12) inches or more of soil immediately. A cell which has been completely covered with soil, at least one (1) foot thick, may be compacted.

~~4.13.2.c.D.~~ 4.13.b.3.D. Asbestos waste must be covered with at least one (1) foot of soil at the end of each day of operation. A final cover of three (3) feet of soil must be placed over all areas that have not been in use or will not be used for more than thirty (30) days. Areas that will not or have not been used for one (1) year, in addition to final soil cover, must be graded for erosion prevention and revegetated.

~~4.13.2.c.E.~~ 4.13.b.3.E. Any active portion of the asbestos disposal area, or area which has not received final cover and revegetation, plus a fifty-foot wide buffer zone on all sides of the area, must be fenced, or a waiver from the director must be obtained. Provided; That a natural barrier exists on the site that adequately deters access by the general public. The fence must be of the six (6) feet high chain link type with three (3) strands of barbed wire on

top. The fence must completely encompass the disposal area and internal buffer zone and maintain access control through locked gates.

~~4.13.2.e.F.~~ 4.13.b.3.F. The fence must bear permanent signs every three hundred (300) feet or closer that boldly state: **"CAUTION: CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD"** in two (2) inch high or larger letters.

~~4.13.2.e.G.~~ 4.13.b.3.G. A plat of the area, surveyed and clearly marked as containing asbestos waste must be provided to the director upon request and must be contained and specifically noted in the deed notation as required by section subdivision 6-2-6 6.2.f of this rule.

~~4.13.2.e.H.~~ 4.13.b.3.H. Asbestos waste must be buried below the natural ground surface of the site, or at a depth below the final grade of the landfill approved by the director, in such a manner as to maximize the prevention of wind and water erosion of the asbestos disposal area.

~~4.13.2.e.I.~~ 4.13.b.3.I. The fenced area of the asbestos disposal facility must not be located closer than fifty (50) feet to the property boundary or building or structure.

~~4.13.2.e.J.~~ 4.13.b.3.J. The permittee is required to maintain records for a period of three (3) years on the nature and quantity of asbestos waste and the source.

~~4.13.3.~~ 4.13.c. Liquids.

Free liquids cannot be disposed of in a landfill. Free liquids and poorly-contained liquids must be absorbed on solid material before being placed in a landfill.

~~4.13.3.a.~~ 4.13.c.1. Permittees must not place bulk or noncontainerized liquid waste in SWLF unless:

~~4.13.3.a.A.~~ 4.13.c.1.A. The waste is household waste other than septic waste; or

~~4.13.3.a.B.~~ 4.13.c.1.B. The waste is leachate or gas condensate derived from the SWLF, whether it is a new or existing SWLF or lateral expansion, is designed with a composite liner and leachate collection system as described in section subparagraph 4.5.4.a.A 4.5.d.1.A of this rule.

~~4.13.3.a.C.~~ 4.13.c.1.C. The Permittee must place the demonstration in the operating record and notify the director that it has been placed in the operating record.

~~4.13.3.b.~~ 4.13.c.2. Permittees must not place containers holding liquid waste in a SWLF unless:

~~4.13.3.b.A.~~ 4.13.c.2.A. The container is a small container similar in size to that normally found in household waste;

~~4.13.3.b.B.~~ 4.13.c.2.B. The container is designed to hold liquids for use other than storage; or

~~4.13.3.b.C.~~ 4.13.c.2.C. The waste is household waste.

~~4.13.4.~~ 4.13.d. Tires.

More than one thousand (1,000) used tires shall not be stored at a facility unless the permit for the facility expressly allows such storage. Tires disposed of in a landfill must be split, cut, or shredded before disposal and must be dispersed in the workface with other solid wastes. Alternative burial not incorporating cutting or splitting at a specific facility may be approved if the method will assure that tires will not emerge.

~~4.13.5.~~ 4.13.e. Drums.

Except as provided in section paragraph 4.13.5.a 4.13.f.1 of this rule, drums and other bulk

containers must not be disposed until emptied and crushed. Pesticide containers must be triple rinsed before disposal.

~~4.13.5.a.~~ 4.13.e.1. Fiber drums of asbestos which are to be disposed of in designated asbestos disposal areas in accordance with the provisions of ~~section subdivision 4.13.2~~ 4.13.b of this rule need not be either emptied or crushed.

~~4.13.6.~~ 4.13.f. Bulky Goods.

Appliances and other bulky waste goods may be accumulated at a facility for not more than sixty (60) days prior to disposal. An alternative schedule may be approved by the director.

~~4.13.7.~~ 4.13.g. Infectious Waste.

Waste as defined in section 2 of this rule, must not be disposed of in a landfill except in accordance with ~~section paragraph 4.7.2.f~~ 4.7.b.6 of this rule. Nonhazardous bottom ash from the incineration of infectious waste must not be considered infectious waste.

~~4.13.8.~~ 4.13.h. Sewage Sludge.

~~4.13.8.a.~~ 4.13.h.1. Sewage sludge disposed at a landfill must contain at least twenty percent (20%) solid by weight. This requirement may be met by adding or blending sand, sawdust, lime, leaves, soil, or other materials that have been approved by the director prior to disposal. Alternative sludge disposal methods can be utilized upon obtaining written approval from the director.

~~4.13.8.b.~~ 4.13.h.2. Sewage sludge may not represent more than twenty-five percent (25%) by weight of the total weight of waste disposed of at the landfill on any working day.

~~4.13.8.c.~~ 4.13.h.3. The Division may require the landfill operator to periodically sample and analyze incoming sewage sludge.

~~4.13.9.~~ 4.13.i. Shredder Fluff.

Shredder fluff must not be disposed of in any facility unless specifically approved in writing by the director.

~~4.13.10.~~ 4.13.j. Municipal Incinerator Ash.

Ash from municipal incinerators must be disposed of on a liner system that conforms to the requirements of ~~47 CSR 35~~ 33CSR20.

~~4.13.11.~~ 4.13.k. Petroleum-Contaminated Soils.

Soils contaminated with petroleum must be disposed of in a manner prescribed by the director.

#### ~~§47-38-5.~~ §33-1-5. Other Solid Waste Facility Performance Standards.

##### 5.1. Requirements for Incinerators.

##### ~~5.1.1.~~ 5.1.a. General Requirements.

~~5.1.1.a.~~ 5.1.a.1. The incinerator must be located, designed, and operated in accordance with ~~section subsection~~ 5.1 of this rule.

~~5.1.1.b.~~ 5.1.a.2 Waste characterization must be performed in accordance with ~~section subsection~~ 5.1 of this rule.

##### ~~5.1.2.~~ 5.1.b. Location Criteria.

~~5.1.2.a.~~ 5.1.b.1. No person may establish, construct, operate, maintain or permit the use of property for any facility:

~~5.1.2.a.A.~~ 5.1.b.1.A. Within a 100-year floodplain; or

~~5.1.2.a.B.~~ 5.1.b.1.B. Within an area where there is a reasonable probability that the facility will cause:

~~5.1.2.a.B.(a)~~ 5.1.b.1.B.1. A significant adverse impact upon natural wetlands;

~~5.1.2.a.B.(b)~~ 5.1.b.1.B.2. A significant adverse impact upon any endangered or threatened species of animal or plant;

~~5.1.2.a.B.(c)~~ 5.1.b.1.B.3. A significant adverse impact upon any surface water;

~~5.1.2.a.B.(d)~~ 5.1.b.1.B.4. A significant adverse impact upon groundwater quality; or

~~5.1.2.a.B.(e)~~ 5.1.b.1.B.5. The migration and concentration of explosive gases in any facility structures, excluding any leachate collection system or gas control or recovery system components or in the soils or air at or beyond the facility property boundary in excess of twenty-five percent (25%) of the lower explosive limit for such gases at any time.

~~5.1.3.~~ 5.1.c. Operational Requirements.

~~5.1.3.a.~~ 5.1.c.1. No person may operate or maintain an incinerator except in conformance with the following minimum requirements, unless an exemption is granted by the director in writing:

~~5.1.3.a.A.~~ 5.1.c.1.A. The facility must be situated, equipped, operated, and maintained as to minimize interference with other activities in the area;

~~5.1.3.a.B.~~ 5.1.c.1.B. Adequate shelter and sanitary facilities must be available for personnel;

~~5.1.3.a.C.~~ 5.1.c.1.C. A sign must be prominently posted at the entrance to the facility which indicates the name, permit number, the hours of operation, the hours waste may be received, necessary safety precautions, and any other pertinent information;

~~5.1.3.a.D.~~ 5.1.c.1.D. All incoming solid waste must be confined to the designated storage area and no putrescible waste may be stored for more than twenty-four (24) hours;

~~5.1.3.a.E.~~ 5.1.c.1.E. Solid waste must be stored in compliance with ~~section 4.5.7.j~~ paragraph 4.7.g.10 of this rule;

~~5.1.3.a.F.~~ 5.1.c.1.F. Dust must be controlled in the unloading and charging areas;

~~5.1.3.a.G.~~ 5.1.c.1.G. Permanent records must be maintained including the weights of material treated, the quantity of resulting ash and residue, hours of plant operation, combustion temperatures, residence time, and other pertinent information;

~~5.1.3.a.H.~~ 5.1.c.1.H. Appropriate firefighting equipment must be available in the storage and charging areas and elsewhere as needed;

~~5.1.3.a.I.~~ 5.1.c.1.I. Arrangements must be made with local fire protection agency to provide adequate emergency firefighting forces;

~~5.1.3.a.J.~~ 5.1.c.1.J. Means of communication with emergency facilities must be provided;

~~5.1.3.a.K.~~ 5.1.c.1.K. Adequate equipment must be provided to allow cleaning after each day of operation or as may be required in order to maintain the plant in a sanitary condition;

~~5.1.3.a.L.~~ 5.1.c.1.L. The charging openings as well as all equipment throughout the plant must be provided with adequate safety equipment;

~~5.1.3.a.M.~~ 5.1.c.1.M. The facility must be designed and operated such that it will not cause a nuisance because of the emission of



noxious odors, gases, contaminants, or particulate matter or exceed emission limitations established by state air pollution control rules;

~~5.1.3.a.N.~~ 5.1.c.1.N. Ash and residue must be disposed of at a solid waste facility permitted by the director to accept the material or be handled by an alternative method approved in writing by the director. Approval will be issued on a case-by-case basis after review of the information contained in reports filed pursuant to ~~section~~ subsection 5.1 of this rule. Ash or residue from a facility with a design capacity of five hundred (500) pounds per hour must be placed in a monofill which must meet the design requirements of ~~47 CSR 35~~ 33CSR20.

~~5.1.3.a.O.~~ 5.1.c.1.O. All wastewater from the facility must be discharged into a sanitary sewer or other system approved in writing by the director;

~~5.1.3.a.P.~~ 5.1.c.1.P. Upon the completion of construction of a new facility, and at least ten (10) days prior to initial operation, the director must be notified to allow inspection of the facility both prior to and during any performance test(s) and initial operation;

~~5.1.3.a.Q.~~ 5.1.c.1.Q. Open burning of solid waste at the facility is prohibited;

~~5.1.3.a.R.~~ 5.1.c.1.R. No hazardous waste may be accepted for disposal;

~~5.1.3.a.S.~~ 5.1.c.1.S. An alternative disposal method, approved by the director in writing, must be used during any time that the facility is inoperative; and

~~5.1.3.a.T.~~ 5.1.c.1.T. The incoming waste must be screened to eliminate unacceptable material from entering the facility such as hazardous waste, asbestos, explosive materials, or other materials which may endanger public health and safety.

#### ~~5.1.4.~~ 5.1.d. Waste Characterization.

~~5.1.4.a.~~ 5.1.d.1. The owner or operator of an incinerator with a design capacity in excess of five hundred (500) pounds per hour must undertake an ash testing program as follows:

~~5.1.4.a.A.~~ 5.1.d.1.A. An ash testing program must be completed within sixty (60) days of construction and shake-down of the incinerator. Representative samples of both fly ash and bottom ash must be tested for physical characteristics, bulk chemical composition, analysis using the appropriate leaching test and analysis using the Toxicity Characteristic Leaching Procedure (TCLP) or other test to determine the wastes' regulatory status under federal or state hazardous waste laws. Test methods, the number of tests, detection limits, and parameters to be tested for will be specified by the director; and

~~5.1.4.a.B.~~ 5.1.d.1.B. A long-term ash testing program must be established. For the first year of operation, quarterly testing of at least one (1) sample of bottom ash and one (1) sample of fly ash must be performed using approved methods and procedures. Thereafter, annual sampling and testing must be performed. The director may specify an alternative testing program.

~~5.1.4.b.~~ 5.1.d.2. The owner or operator of a facility with a design capacity of five hundred (500) pounds per hour or less may be required to undertake the testing program described in ~~section 5.1.4.a~~ paragraph 5.1.d.1 of this rule if the director determines through an examination of information required in ~~section 5.1.3.a~~ paragraph 5.1.c.1 of this rule that such testing is warranted.

#### 5.2. Requirements for Transfer Stations.

##### ~~5.2.1.~~ 5.2.a. General.

~~5.2.1.a.~~ 5.2.a.1. No person may



conduct transfer station activities unless the director has first issued a permit for the activities in accordance with the requirements of this rule.

~~5.2.1.b:~~ 5.2.a.2. No person conducting transfer station activities may allow ash, residue, or other waste specified in ~~section subsection~~ 4.13 of this rule to be received or handled at a transfer station unless the director has specifically approved handling that waste by the permit.

~~5.2.1.c:~~ 5.2.a.3. No person conducting transfer station activities may:

~~5.2.1.c.A:~~ 5.2.a.3.A. Mix solid waste with, or store solid waste in such close proximity to other solid waste to create a risk of fire or explosion, or a risk to the accumulation of poisonous or otherwise harmful vapors or gases; or

~~5.2.1.c.B:~~ 5.2.a.3.B. Allow explosive waste to be processed at the facility.

~~5.2.1.d:~~ 5.2.a.4. Regulated hazardous waste may not be disposed, processed, or stored where transfer station activities are conducted.

~~5.2.2:~~ 5.2.b. Location Criteria.

Transfer stations must be sited in compliance with the location requirements of ~~sections subsection~~ 3.1, and ~~subdivisions 3.2.3 3.2.c and 3.2.5 3.2.e~~ of this rule and may not be sited within one hundred (100) feet of a perennial stream.

~~5.2.3:~~ 5.2.c. Signs.

A person conducting transfer station activities must identify the operation by posting and maintaining a sign in accordance with ~~section 4.6.1.a.M~~ subparagraph 4.6.a.1.M of this rule.

~~5.2.4:~~ 5.2.d. Access Control.

~~5.2.4.a:~~ 5.2.d.1. A gate or other barriers must be maintained at potential vehicular access points to block unauthorized access to the site when an attendant is not on duty.

~~5.2.4.b:~~ 5.2.d.2. The operator must construct and maintain a fence or other suitable barrier around the site sufficient to prevent unauthorized access.

~~5.2.4.c:~~ 5.2.d.3. Access to the site must be limited to times when an attendant is on duty.

~~5.2.5:~~ 5.2.e. Access Roads.

Access roads must be designed, constructed, and maintained in accordance with ~~section 4.5.3~~ subdivision 4.5.c of this rule.

~~5.2.6:~~ 5.2.f. Measuring Waste.

Solid waste delivered to a transfer station must be accurately weighed or otherwise accurately measured prior to unloading in accordance with the provisions of ~~110-CSR-6A 110CSR6A-sections~~ subsections 4.2 and 4.3.

~~5.2.7:~~ 5.2.g. Operations and Equipment.

~~5.2.7.a:~~ 5.2.g.1. Loading, unloading, storage, compaction and related activities must be conducted in an enclosed building, unless otherwise approved by the director.

~~5.2.7.b:~~ 5.2.g.2. The permittee must maintain on the site equipment necessary for operation of the facility in accordance with the permit. The equipment must be maintained in an operable condition.

~~5.2.7.c:~~ 5.2.g.3. Standby equipment must be located on the site or at a place where it can be available within twenty-four (24) hours. If a breakdown of the operator's equipment occurs, the operator must utilize standby equipment as necessary to comply with this rule.

~~5.2.7.d.~~ 5.2.g.4. Equipment must be operated and maintained so as to prevent solid waste from being unintentionally removed from the storage area.

~~5.2.7.e.~~ 5.2.g.5. Equipment used to handle putrescible solid waste must be cleaned at the end of each working day.

~~5.2.8.~~ 5.2.h. Unloading Area.

~~5.2.8.a.~~ 5.2.h.1. The approach and unloading area must be adequate in size and design to facilitate the rapid unloading of solid waste from the collection vehicles and the unobstructed maneuvering of the vehicles and other equipment.

~~5.2.8.b.~~ 5.2.h.2. The loading areas and unloading areas must be constructed of impervious material which is capable of being cleaned by high pressure water spray and must be equipped with drains or sumps connected to a sanitary sewer system or treatment facility to facilitate the removal of water.

~~5.2.8.c.~~ 5.2.h.3. If the facility has an unloading pit, the facility must have in place truck wheel curbs and tie downs that are sufficient to prevent trucks from backing into the pit or falling into the pit while unloading.

~~5.2.8.d.~~ 5.2.h.4. An attendant or clearly marked signs must direct vehicles to the unloading area.

~~5.2.8.e.~~ 5.2.h.5. The permittee must ensure that collection vehicles unload waste promptly in unloading areas.

~~5.2.8.f.~~ 5.2.h.6. Solid waste must be confined to the unloading area and the approved storage areas.

~~5.2.9.~~ 5.2.i. Cleaning and Maintenance.

~~5.2.9.a.~~ 5.2.i.1. All areas within the

building must be kept clean.

~~5.2.9.b.~~ 5.2.i.2. The operator must not allow putrescible waste to remain at the transfer station at the end of the day or for more than twenty-four (24) hours.

~~5.2.9.c.~~ 5.2.i.3. Plumbing must be properly maintained, and the floors must be well drained.

~~5.2.9.d.~~ 5.2.i.4. Macerators, hammer mills, and grinders must be cleanable and must be equipped with drains that connect to a sanitary sewer system or treatment facility.

~~5.2.9.e.~~ 5.2.i.5. Provision must be made for the routine operational maintenance of the facility.

~~5.2.10.~~ 5.2.j. Water Quality Protection.

All permit holders must meet the requirements of W. Va. Code §22-11-1 et seq. and the rules promulgated thereunder.

~~5.2.11.~~ 5.2.k. Other Requirements.

~~5.2.11.a.~~ 5.2.k.1. The operator must also prevent and eliminate conditions not otherwise prohibited by this rule that are harmful to the environment or public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

~~5.2.11.b.~~ 5.2.k.2. No person may cause or allow open burning.

~~5.2.11.c.~~ 5.2.k.3. The operator must prevent the attraction, harborage or breeding of vectors.

~~5.2.11.d.~~ 5.2.k.4. Salvaging of materials must not be conducted unless salvaging is controlled by the operator to prevent interference with prompt and sanitary operations and is conducted to prevent a health hazard or

nuisance.

~~5.2.11.e.~~ 5.2.k.5. Salvaged materials must be promptly removed from the unloading area and either stored in an approved area or transported off-site.

~~5.2.11.f.~~ 5.2.k.6. The operator must not allow litter to be blown or otherwise deposited off-site.

~~5.2.11.g.~~ 5.2.k.7. Fences or other barriers sufficient to control blowing litter must be located in the area immediately downwind from the unloading area, unless transfer activities are conducted within an enclosed building or the solid waste being transferred cannot create blowing litter.

~~5.2.11.h.~~ 5.2.k.8. Litter must be collected at least weekly from fences, roadways, tree line barriers, and other barriers and disposed or stored in accordance with the Act, regulations and rules promulgated thereunder, unless a greater frequency is set forth in the permit.

~~5.2.11.i.~~ 5.2.k.9. A facility subject to this rule must be designed, constructed, maintained, and operated to prevent and minimize the potential for fire, explosion, or release of solid waste constituents to the air, water, or soil of this state that could threaten public health or safety, public welfare, or the environment.

~~5.2.11.j.~~ 5.2.k.10. The operator of a transfer station must meet all of the reporting requirements as specified in ~~section~~ subsection 4.12 of this rule.

~~5.2.11.k.~~ 5.2.k.11. The facility must be surrounded with rapidly growing trees, shrubbery, fencing, berms, or other appropriate means to screen it from the surrounding area.

~~5.2.11.l.~~ 5.2.k.12. Only household waste and commercial waste must be accepted at the facility. No industrial waste, infectious waste,

construction and demolition debris, or hazardous waste regulated under ~~47 CSR 35~~ 33CSR20 must be accepted unless specifically approved by the director.

~~5.2.11.m.~~ 5.2.k.13. All solid waste passing through the transfer station must be ultimately treated or disposed of at a facility authorized by the Division if in this state, or by the appropriate governmental agency or agencies if in other states, territories, or nations.

~~5.2.11.n.~~ 5.2.k.14. A transfer station with operating mechanical equipment must have an attendant on duty at all times that the facility is open. Suitable fencing, gates, or signs must be provided.

~~5.2.11.o.~~ 5.2.k.15. All floors must be drained and free from standing water. All drainage from cleaning areas must be discharged to sanitary sewers or the equivalent.

~~5.2.11.p.~~ 5.2.k.16. Adequate storage space for incoming solid waste must be available at the transfer station.

~~5.2.11.q.~~ 5.2.k.17. All solid waste must be removed from the transfer station facility whenever transfer containers are full, or weekly, whichever comes first.

5.3. Requirements for Recycling Facilities.  
(Performance Standards Reserved).

5.4. Requirements for  
Construction/Demolition "Class D" Solid Waste  
Facilities.

~~5.4.1.~~ 5.4.a. General Requirements.

Only the construction/demolition wastes approved in the facility permit must be accepted. Putrescible, household, automobile shredder fluff, industrial and sludge wastes are prohibited.

~~5.4.2.~~ 5.4.b. Class D-1 Facility

## Requirements.

Class D-1 solid waste facilities must meet all of the requirements in section 4 of this rule unless an alternative standard from ~~section 5.4.2 subdivision 5.4.b~~ of this rule is met or the director has granted, upon written request, an exemption from a specific requirement of section 4 of this rule.

~~5.4.2.a. 5.4.b.1.~~ A liner system for a Class D-1 solid waste facility must consist of the following elements:

~~5.4.2.a.A. 5.4.b.1.A.~~ Subbase;

~~5.4.2.a.B. 5.4.b.1.B.~~ Compacted soil liner; and

~~5.4.2.a.C. 5.4.b.1.C.~~ Leachate collection and protective cover zone.

~~5.4.2.b. 5.4.b.2.~~ The subbase portion of the liner system must consist of a cleared and grubbed natural ground surface capable of supporting the entire liner system.

~~5.4.2.c. 5.4.b.3.~~ The compacted soil liner must:

~~5.4.2.c.A. 5.4.b.3.A.~~ Be a minimum compacted thickness of two (2) feet;

~~5.4.2.c.B. 5.4.b.3.B.~~ Be compacted in six (6) inch lifts;

~~5.4.2.c.C. 5.4.b.3.C.~~ Be no more permeable than  $1 \times 10^{-6}$  cm/sec based on laboratory and field testing;

~~5.4.2.c.D. 5.4.b.3.D.~~ Be free of particles greater than three (3) inches in any dimension;

~~5.4.2.c.E. 5.4.b.3.E.~~ Be placed without damaging the subgrade;

~~5.4.2.c.F. 5.4.b.3.F.~~ Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted soil nor the subbase is frozen;

~~5.4.2.c.G. 5.4.b.3.G.~~ Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface; and

~~5.4.2.c.H. 5.4.b.3.H.~~ Be designed, operated, and maintained so that the physical and chemical characteristics of the liner and the liner's ability to restrict the flow of solid waste, solid waste constituents, or leachate is not adversely affected by the leachate.

~~5.4.2.c.I. 5.4.b.3.I.~~ The compacted soil construction liner certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of the leachate collection and protective cover zone.

~~5.4.2.d. 5.4.b.4.~~ The leachate collection and protective cover zone must:

~~5.4.2.d.A. 5.4.b.4.A.~~ Create a flow zone between the compacted soil liner and solid waste more permeable than  $1 \times 10^{-5}$  cm/sec based on laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the composite liner;

~~5.4.2.d.B. 5.4.b.4.B.~~ Be at least eighteen (18) inches thick;

~~5.4.2.d.C. 5.4.b.4.C.~~ Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the composite liner does not exceed one (1) foot at the expected flow capacity from the drainage area except during storm events;

~~5.4.2.d.D. 5.4.b.4.D.~~ Be

comprised of clean soil or earthen materials that contain no debris, plant material, rocks, or other solid material larger than one-quarter (1/4) inch in diameter and no material with sharp edges;

~~5.4.2.d.F. 5.4.b.4.E.~~ Be graded, uniformly compacted, and smoothed;

~~5.4.2.d.F. 5.4.b.4.F.~~ Be installed in a manner that prevents damage to the compacted soil liner; and

~~5.4.2.d.G. 5.4.b.4.G.~~ Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system must also meet the following:

~~5.4.2.d.G.(a) 5.4.b.4.G.1.~~ The slope sizing and spacing of the piping system must ensure that liquids drain efficiently from the leachate collection zone;

~~5.4.2.d.G.(b) 5.4.b.4.G.2.~~ The distance between pipes in the piping system may not exceed one (100) hundred feet on center;

~~5.4.2.d.G.(c) 5.4.b.4.G.3.~~ The pipes must be installed perpendicular to the flow;

~~5.4.2.d.G.(d) 5.4.b.4.G.4.~~ The minimum diameter of the perforated pipe must be four (4) inches with a wall thickness of Schedule 40 or greater;

~~5.4.2.d.G.(e) 5.4.b.4.G.5.~~ The pipe must be capable of supporting anticipated loads without failure based on facility design;

~~5.4.2.d.G.(f) 5.4.b.4.G.6.~~ Rounded stones or aggregates must be placed around the pipes of the piping system. The stones or aggregates must be sized to prevent clogging of the pipes and damage to the composite liner;

~~5.4.2.d.G.(g) 5.4.b.4.G.7.~~ The piping system must be installed in a fashion that

facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers must be located along the perimeter of the leachate detection piping system. The number and spacing of the manholes or cleanout risers must be sufficient to ensure proper maintenance of the piping system by water jet flushing or an equivalent method; and

~~5.4.2.d.G.(h) 5.4.b.4.G.8.~~ The leachate collection system must be cleaned and maintained as necessary.

~~5.4.2.d.H. 5.4.b.4.H.~~ The leachate collection zone construction certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of solid waste.

~~5.4.3. 5.4.c.~~ Class D Facility Requirements. Except as herein specified, Class D solid waste facilities are exempt from the requirements of section 4 of this rule unless otherwise required by the director, but must comply with the requirements of ~~sections 5.4.3.a through 5.4.3.g~~ paragraphs 5.4.c.1 through 5.4.c.7 of this rule. A Class D facility other than a Class D-1 solid waste facility shall not exceed two (2) acres in size.

~~5.4.3.a. 5.4.c.1.~~ Access must be controlled in such a manner as to discourage unauthorized entry and must be limited to those authorized to deposit waste material and only during scheduled hours.

~~5.4.3.b. 5.4.c.2.~~ Construction/demolition and cover material must not be placed into a stream channel and must be placed in such a way to prevent erosion and sedimentation.

~~5.4.3.c. 5.4.c.3.~~ Cover material must be graded and maintained to prevent ponding and minimize erosion.

~~5.4.3.d. 5.4.c.4.~~ Erosion and sediment controls must be installed as necessary to prevent sedimentation.

~~5.4.3.e.~~ 5.4.c.5. The disturbed area must be revegetated to prevent erosion and sedimentation in accordance with ~~section 4.5.6~~ subdivision 4.5.f of this rule.

~~5.4.3.f.~~ 5.4.c.6. Except when extended by the director, all operations for a Class D solid waste facility must have been completed including covering with a minimum of twenty-four (24) inches of soil, regrading, dressing up, seeding, mulching and fertilizing prior to the expiration date of the permit.

~~5.4.3.g.~~ 5.4.c.7. The permittee must notify the director to arrange for a final inspection prior to removing equipment from the site. All site reclamation must be completed before equipment removal.

~~5.4.3.h.~~ 5.4.c.8. The director may require a Class D solid waste facility to meet any specific requirement in section 4 of this rule.

#### 5.5. Requirements for Class F Solid Waste Facilities.

Except as provided in ~~section~~ subsection 5.5 of this rule, all requirements of ~~these regulations~~ this rule shall be applicable to Class F solid waste facilities.

##### ~~5.5.1.~~ 5.5.a. Waivers and Modifications.

During the permit issuance process or upon written request or appropriate notation on the application by the permittee, the director may waive or modify the requirements of the subsections of section 3 of this rule that are listed in ~~section 5.5.1.a~~ paragraph 5.5.a.1 of this rule and the requirements of the subsections of section 4 of this rule that are listed in ~~section 5.5.1.b~~ paragraph 5.5.a.2 of this rule. Failure of the applicant to supply documentation requested by the director, which is necessary to justify the requested waiver or modification, are grounds for waiver or modification denial. Each request for waiver or modification of a requirement of section

3 or 4 of this rule must be based upon sound engineering judgement taking into consideration the type of waste to be disposed, the type facility, and site characteristics.

~~5.5.1.a.~~ 5.5.a.1. The following requirements of section 3 of this rule which may be waived or modified by the director: ~~sections 3.4, 3.7.6.g, 3.7.10, 3.7.11, 3.7.13, 3.8.3.a.C.(d), 3.8.4.d.A, 3.10.1.f, 3.10.3, 3.13, 3.14, and 3.16.4~~ subsection 3.4, paragraph 3.7.f.7, subdivisions 3.7.j, 3.7.k, and 3.7.m; part 3.8.c.1.C.4, subparagraph 3.8.d.4.A, paragraph 3.10.a.6, subdivision 3.10.c, subsections 3.13, and 3.14, and subdivision 3.16.d of this rule.

~~5.5.1.a.A.~~ 5.5.a.1.A. The requirements of ~~sections 3.8.4.e, 3.8.9.a.B, 3.9, 3.10.1.a and 3.11.3~~ paragraph 3.8.d.5, subparagraph 3.8.i.1.B, subsection 3.9, paragraph 3.10.a.1 and subdivision 3.11.c of this rule and the gas monitoring and control provisions of ~~sections 3.10.1.b, 3.10.1.d, and 3.10.2.e~~ paragraphs 3.10.a.2, 3.10.a.4, and 3.10.b.3 of this rule may also be waived or modified by the director for coal combustion by-product facilities.

~~5.5.1.b.~~ 5.5.a.2. The following requirements of section 4 of this rule which may be waived or modified by the director for Class F facilities: ~~sections 4.4, 4.5.2.e.A.(e), 4.5.3, 4.5.4, 4.5.7.g, 4.5.7.h, 4.5.7.i, 4.5.7.j, 4.6.2.a.B, 4.6.2.a.C, 4.6.2.b.A, 4.6.2.b.B, 4.6.2.b.D, 4.8.3.e.B, 4.10, 4.12, and 4.13.2.e~~ subsection 4.4, part 4.5.b.3.A.3, subdivisions 4.5.c, 4.5.d, paragraphs 4.5.g.7, 4.5.g.8, 4.5.g.9, and 4.5.g.10, subparagraphs 4.6.b.1.B, 4.6.b.1.C, 4.6.b.2.A, 4.6.b.2.B, 4.6.b.2.D and 4.8.c.3.B, subsections 4.10 and 4.12, and paragraph 4.13.b.3 of this rule.

#### ~~5.5.2.~~ 5.5.b. Requirements for Coal Combustion By-Product Facilities.

##### ~~5.5.2.a.~~ 5.5.b.1. Liner System Requirements.

Liner system requirements for coal



combustion by-product landfills, solid waste disposal surface impoundments and surface impoundments, or portions thereof, placed in operation after the effective date of this rule must be as follows:

~~5.5.2.a.A.~~ 5.5.b.1.A. The liner system for landfills shall consist of eighteen (18) inches of clay, having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted in six (6) inch lifts to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698. A sixty (60) mil HDPE synthetic liner shall be installed on top of the compacted clay liner. A leachate collection system consisting of a perforated piping system embedded within an eighteen (18) inch drainage layer, which can consist of bottom ash, having a minimum permeability of  $1 \times 10^{-3}$  centimeters per second shall be installed on top of the synthetic liner. The eighteen (18) inch leachate collection system layer shall serve as the protective cover for the synthetic liner.

~~5.5.2.a.B.~~ 5.5.b.1.B. The permittee may elect and construct an alternative liner system for landfills consisting of at least two (2) feet of clay, having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted in six (6) inch lifts to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698. Taking into account site-specific conditions, an appropriate groundwater interceptor drainage system, which shall also serve as a leachate detection system, shall be installed under the clay liner in such a manner as to avoid groundwater penetration of the liner system and to facilitate detection of leachate penetrating the liner. An appropriate leachate collection system, which can consist of bottom ash, having a minimum permeability of  $1 \times 10^{-3}$  centimeters per second shall be installed on top of the compacted clay liner provided that this liner system is prohibited for use in major domestic use aquifer areas, major alluvial aquifers, or karst regions.

~~5.5.2.a.C.~~ 5.5.b.1.C. Other alternative liner systems for landfills may be approved by the director on a case-by-case basis. Such alternative liner system may be more or less stringent than the liner system described in ~~section 5.5.2.a.A~~ subparagraph 5.5.b.1.A of this rule as determined by sound engineering judgement taking into consideration the type of waste to be disposed, type of facility, site characteristics, operating experience of similar landfills, and protection of the groundwater.

~~5.5.2.a.D.~~ 5.5.b.1.D. Failure of an alternative liner design at the applicant's facility may result in the director disallowing the use of identical technology in new landfills proposed by the applicant unless the applicant can demonstrate a remedy for the technology's past failure.

~~5.5.2.a.E.~~ 5.5.b.1.E. The liner system for solid waste disposal surface impoundments shall be designed and constructed with a leachate detection system imbedded in a filter media having a minimum permeability of  $1 \times 10^{-3}$  centimeters per second topped by eighteen (18) inches of clay, having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted in six (6) inch lifts to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698, with a sixty (60) mil synthetic liner installed over the compacted clay.

~~5.5.2.a.F.~~ 5.5.b.1.F. Other alternative liner systems for solid waste disposal surface impoundments may be considered by the director on a case-by-case basis. Such determination must be based upon sound engineering judgement taking into consideration the type of waste to be disposed, type of facility, site characteristics, and groundwater monitoring results at similar existing solid waste disposal surface impoundments.

~~5.5.2.a.G.~~ 5.5.b.1.G. For surface impoundments receiving leachate, a permittee may elect use of a liner system consisting of



either eighteen (18) inches of clay having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698, with a sixty (60) mil synthetic liner installed on top of the clay; two (2) feet of clay with the aforementioned permeability rate and compaction density; or any other alternative liner system approved by the director on a case-by-case basis. Taking into account site-specific conditions, an appropriate groundwater interceptor drainage system, which must also serve as a leachate detection system, must be installed under all liner systems in such a manner as to avoid groundwater penetration of the liner system and to facilitate detection of leachate penetrating the liner.

~~5.5.2.a.H.~~ 5.5.b.1.H. The provisions of ~~section 4.8.3.e.B~~ subparagraph 4.8.c.3.B of this rule do not apply to coal combustion by-product surface impoundments. Surface impoundments associated with a coal combustion by-product facility are not subject to any of the groundwater monitoring requirements of this rule if such impoundments are covered by the overall groundwater monitoring plan for the coal combustion by-product facility.

~~5.5.2.b.~~ 5.5.b.2. Operating Requirements.

Operating requirements for coal combustion by-product landfills and solid waste disposal surface impoundments in operation on or closed prior to the effective date of this rule are as follows:

~~5.5.2.b.A.~~ 5.5.b.2.A. Operating landfills in existence on the effective date of this rule may remain in operation and without liner retrofit unless there is a statistically significant increase in groundwater monitoring parameters as determined by the monitoring provisions of ~~section-subsection~~ subsection 4.11 of this rule. Groundwater remediation may be determined on a case-by-case basis by the director based upon an evaluation of

the information from groundwater monitoring and assessment programs, as provided for in ~~section~~ subsection 4.11 of this rule. Upon evidence of such contamination, a corrective action program may be required as described in ~~section 4.11.e~~ subdivision 4.11.e of this rule. Such corrective action programs may include closure in accordance with section 6 of this rule, retrofit in accordance with ~~section 5.5.2.a~~ paragraph 5.5.b.1 of this rule, or other appropriate remediation measures.

~~5.5.2.b.B.~~ 5.5.b.2.B. For coal combustion by-product landfills in existence on the effective date of this rule, the liner provisions of ~~sections 5.5.2.a.A, 5.5.2.a.B, and 5.5.2.a.C~~ subparagraphs 5.5.b.1.A, 5.5.b.1.B, and 5.5.b.1.C of this rule and the provisions of ~~section~~ subsection 4.11 of this rule do not apply to closed or closed portions of such landfills. Monitoring shall not be required for such facilities that are closed prior to the effective date of this rule except for currently-permitted closed facilities or in connection with any remedial or corrective action program ordered by the director.

~~5.5.2.b.C.~~ 5.5.b.2.C. The requirements of this rule are not applicable to coal combustion by-product disposal surface impoundments in existence on or before the effective date of this rule and which are operating under a permit issued under W. Va. Code §22-11-1 et seq., except that all such impoundments shall be required to have an adequate groundwater monitoring system in place. Groundwater remediation may be determined on a case-by-case basis by the director based upon an evaluation of the information from groundwater monitoring and assessment programs. Evidence of groundwater contamination, as determined by ~~section~~ subsection 4.11 of this rule, may require a corrective action program as described in ~~section 4.11.5~~ subdivision 4.11.e of this rule.

~~5.5.2.e.~~ 5.5.b.3. Leachate Analysis.

The requirements of ~~section 4.8.4~~ subdivision

4.8.d of this rule apply to coal combustion by-product landfills and surface impoundments with the exception that the requirements in section 4.8.4.b paragraph 4.8.d.2 of this rule shall be replaced by the following:

~~5.5.2.e.A.~~ 5.5.b.3.A. On a semiannual basis, the chemical composition of the leachate flowing into a leachate treatment system from a coal combustion by-product facility must, unless waived by the director, be determined through the analysis of the leachate for the following parameters: alkalinity, arsenic, barium, bicarbonate, hardness, boron, cadmium, calcium, chloride, total and hexavalent chromium, iron, lead, manganese, magnesium, sulfate, total dissolved solids, total organic carbon (TOC), specific conductance, zinc, and any other parameter which is specifically known to be associated with the wastes in question and specified by the director in writing.

~~5.5.2.e.A.(a)~~ 5.5.b.3.A.1. The monitoring parameters listed in ~~section 5.5.2.e.A subparagraph 5.5.b.3.A~~ of this rule must be reported as total metals, unless otherwise specified by the director.

~~5.5.2.d.~~ 5.5.b.4. Beneficial Use of Coal Combustion By-Products.

The following uses of coal combustion by-products are deemed to be beneficial and do not require a permit under this rule so long as such uses are consistent with the requirements of ~~section 5.5.2.d paragraph 5.5.b.4~~ of this rule:

~~5.5.2.d.A.~~ 5.5.b.4.A. Coal combustion by-products used as a material in manufacturing another product (e.g., concrete, flowable fill, lightweight aggregate, concrete block, roofing materials, plastics, paint) or as a substitute for a product or natural resource (e.g., blasting grit, filter cloth precoat for sludge dewatering);

~~5.5.2.d.B.~~ 5.5.b.4.B. Coal

combustion by-products used for the extraction or recovery of materials and compounds contained within the coal combustion by-products;

~~5.5.2.d.C.~~ 5.5.b.4.C. Coal combustion by-products used as a stabilization/solidification agent for other wastes. This use of coal combustion by-products shall be considered a beneficial use for the purposes of ~~section 5.5.2.d paragraph 5.5.b.4~~ of this rule if the coal combustion by-product is used singly or in combination with other additives or agents to stabilize or solidify another waste product and if:

~~5.5.2.d.C.(a)~~ 5.5.b.4.C.1. The person or entity proposing the use has first given advance written notice to the director; and

~~5.5.2.d.C.(b)~~ 5.5.b.4.C.2. The use results in altered physical or chemical characteristics of the other waste and a reduction of the potential for the resulting stabilized mixture to leach constituents into the environment;

~~5.5.2.d.D.~~ 5.5.b.4.D. Coal combustion by-products used under the authority of W. Va. Code Chapter 22, Articles 2 and 3 of the ~~West Virginia Division of Environmental Protection §§22-2-1 et seq. and 22-3-1 et seq.~~

~~5.5.2.d.E.~~ 5.5.b.4.E. Coal combustion by-products used as pipe bedding or as a composite liner drainage layer;

~~5.5.2.d.F.~~ 5.5.b.4.F. Coal combustion by-products used as a daily or intermediate cover for Class A, Class B, or Class C solid waste facilities if the specific permit allows for such use;

~~5.5.2.d.G.~~ 5.5.b.4.G. Coal combustion bottom ash or boiler slag used as an anti-skid material if such use is consistent with Department of Highways specifications. The use of fly ash as an anti-skid material is not deemed to be a beneficial use; and

~~5.5.2.d.H.~~ 5.5.b.4.H. Coal combustion by-products used as a construction material (e.g., subbases, bases) for roads or parking lots that have asphalt or concrete wearing surfaces if approved by the West Virginia Division of Highways or the project owner.

Note: ~~Section 5.5.2.d~~ Paragraph 5.5.b.4 of this rule does not specifically address the beneficial use of coal combustion by-products for structural fills and as soil amendment. These beneficial use applications will be considered in future rulemaking. Until such time, the established prior practices will be continued.

~~5.5.3.~~ 5.5.c. Requirements for Industrial Solid Waste Facilities Other Than Coal Combustion By-Product Facilities.

~~5.5.3.a.~~ 5.5.c.1. Liner System Requirements.

Liner system requirements for industrial solid waste landfills and solid waste disposal surface impoundments are as follows:

~~5.5.3.a.A.~~ 5.5.c.1.A. Except as otherwise provided in ~~section 5.5.3~~ subdivision 5.5.c of this rule, all provisions of section 4 of this rule are applicable to industrial solid waste landfills and industrial solid waste disposal surface impoundments constructed after the effective date of this rule.

~~5.5.3.a.A.(a)~~ 5.5.c.1.A.1. Any provision of section 4 of this rule may be waived or modified by the director upon written request of the permittee if such provision, in the discretion of the director, clearly does not apply to the industrial solid waste facility or where the waiver or modification is shown to be appropriate for the facility type, type of waste disposed, or site characteristics. Any alternative approved by the director shall be based upon good engineering judgement.

~~5.5.3.a.B.~~ 5.5.c.1.A.2. For

industrial solid waste landfills in existence on the effective date of this rule, the liner provisions in sections 4 and subsection 5.5 of this rule do not apply to closed or closed portions of such landfills. However, the liner provisions apply to any expansion of such facilities. In order to continue to use an active portion of an existing landfill which is unlined after November 5, 1991, the permittee must enter into a compliance schedule requiring such active unlined portions to be closed or retrofitted where appropriate in accordance with this rule by an agreed date by which all waste must thereafter be placed on an approved liner system, which date shall be no later than thirty (30) months following the effective date of this rule.

~~5.5.3.a.C.~~ 5.5.c.1.C. Solid waste disposal surface impoundments in operation on the effective date of this rule may continue operation throughout the design life of the impoundment, provided the impoundment must not be expanded to a size greater than the design approved by the director in the permit last issued for the facility. Groundwater remediation may be determined on a case-by-case basis by the director based upon an evaluation of the information developed under the assessment provisions of ~~section 4.11.5~~ subdivision 4.11.e of this rule.

~~5.5.3.b.~~ 5.5.c.2. Appropriate monitoring provisions of ~~section subsection 4.11~~ of this rule shall be incorporated into the permits for industrial solid waste landfills and industrial solid waste disposal surface impoundments in operation on the effective date of this rule. No monitoring shall be required for such facilities closed prior to the effective date of this rule except for closed facilities under a permit as of the effective date of this rule or in connection with any remedial or corrective action program ordered by the director.

5.6. Requirements for Uncommon or Miscellaneous Facilities.

~~5.6.1.~~ 5.6.a. Green Boxes, Bins, Roll-

## Offs and Dumpsters.

~~5.6.1.a.~~ 5.6.a.1. Each person who causes to be placed a green box, bin, roll-off or dumpster at places other than approved solid waste facilities are responsible for maintenance, prevention of litter, open dump control, and leachate management at the site of the dumpster.

### ~~5.6.2.~~ 5.6.b. Composting. (Reserved)

Note: Composting requirements are regulated under ~~Title 47 Series 38D~~ 33CSR2 "Sewage Sludge Management ~~Regulations Rule,~~" and Title ~~47 Series 38E~~ 33CSR3 "Yard Waste Composting ~~Regulations Rule.~~"

## ~~§47-38-6.~~ §33-1-6. Closure and Post-Closure Care.

### 6.1. Permanent Closure Criteria.

#### ~~6.1.1.~~ 6.1.a. Applicability.

Any person who maintains or operates a solid waste facility must, when the fill area or portion thereof reaches final grade or when the director determines that closure is required, cease to accept waste and perform closure activities at the facility or portion thereof in accordance with the plan approval issued by the director and the provisions of ~~section subsection~~ 6.1 of this rule unless otherwise approved by the director in writing.

~~6.1.1.a.~~ 6.1.a.1. Upon request of the permittee, or upon the director's own initiative, the director may waive or modify any of the closure requirements of section 6 of this rule or allow alternative permit conditions or practices as appropriate for a specific coal combustion by-product facility or industrial solid waste facility based upon the type of wastes disposed, type of facility, site characteristics and sound engineering judgement.

#### ~~6.1.1.b.~~ 6.1.a.2. Closure of existing

solid waste landfills.

~~6.1.1.b.A.~~ 6.1.a.2.A. Existing SWLFs that cannot make the demonstration specified in ~~section subdivision 3-2.7~~ 3.2.g pertaining to airports, ~~section subdivision 3-2.4~~ 3.2.d pertaining to floodplains, or ~~section subdivision 3-2.10~~ 3.2.j pertaining to unstable areas, must close by October 9, 1996, in accordance with ~~section subsection~~ 6.1 of this rule and conduct post-closure activities in accordance with ~~section subsection~~ 6.3 of this rule.

~~6.1.1.b.B.~~ 6.1.a.2.B. The deadline for closure may be extended up to two years if the permittee can demonstrate to the director in writing that:

~~6.1.1.b.B.(a)~~ 6.1.a.2.B.1. There is no available alternative disposal capacity;

~~6.1.1.b.B.(b)~~ 6.1.a.2.B.2. There is no immediate threat to human health and the environment.

### ~~6.1.2.~~ 6.1.b. Notification Procedures.

~~6.1.2.a.~~ 6.1.b.1. At least one hundred and twenty (120) days prior to closing the facility, the permittee must notify the director in writing of the intent to close the facility and the expected date of closure. Prior to this date, the permittee must notify all users of the facility of the intent to close the facility so that alternative disposal options may be evaluated.

~~6.1.2.b.~~ 6.1.b.2. Signs must be posted at all points of access to the facility at least thirty (30) days prior to closure indicating the date of closure and alternative disposal facilities.

~~6.1.2.c.~~ 6.1.b.3. Notice of the upcoming closure must be a Class II legal advertisement which must be published in a local newspaper at least thirty (30) days prior to closure and a copy of the notice must be provided to the director within ten (10) days of the date of

publication.

~~6.1.3.~~ 6.1.c. Restricted Access.

Within ten (10) days after ceasing to accept waste, the permittee must restrict access by the use of gates, fencing, or other appropriate means to ensure against further use of the facility. If the final use allows access, such access must be restricted until closure has been completed and approved by the director.

~~6.1.4.~~ 6.1.d. Deed Notation.

~~6.1.4.a.~~ 6.1.d.1. Following closure of all portions of the SWLF, the owner or operator must record a deed notation to the SWLF facility property with the county clerk's office that must be available with the deed of the property that will in perpetuity notify any potential purchaser of the following: (The permittee must also retain a copy of the deed notation in the facility operating record.)

~~6.1.4.a.A.~~ 6.1.d.1.A. The land has been used as a landfill facility;

~~6.1.4.a.B.~~ 6.1.d.1.B. Its use is restricted under ~~section paragraph 6.3.6.e~~ 6.3.f.3 to ensure post-closure care including any use that would interfere with maintaining the integrity and effectiveness of the final cover and maintaining the system to control the formation and release of leachate and explosive gases into the environment.

~~6.1.4.a.C.~~ 6.1.d.1.C. The permittee may request permission from the director to remove the notation from the deed if all wastes are removed from the facility.

~~6.1.4.b.~~ 6.1.d.2. The deed must include at a minimum:

~~6.1.4.b.A.~~ 6.1.d.2.A. A survey plot indicating the location and dimension of the landfill;

~~6.1.4.b.B.~~ 6.1.d.2.B. A record of waste, including type, location, and quantity of waste disposed of at the site; and

~~6.1.4.b.C.~~ 6.1.d.2.C. Disposal location of asbestos and any other waste specified by the director.

~~6.1.4.e.~~ 6.1.d.3. A certification of deed notation must be filed with the director within ninety (90) days of closure.

~~6.1.5.~~ 6.1.e. Closure and Post-Closure Care.

~~6.1.5.a.~~ 6.1.e.1. Unless otherwise approved by the director in writing, the closure plan must include the installation of a final cover system that is designed to minimize infiltration and erosion, as follows:

~~6.1.5.a.A.~~ 6.1.e.1.A. The permittee must provide a final cover system comprised of an erosion layer underlain by an infiltration layer and grading in the following manner:

~~6.1.5.a.A.(a)~~ 6.1.e.1.A.1. Gas Management Layer.

A one (1) foot layer of a material with a high hydraulic conductivity or a geocomposite drainage layer having a permeability of at least  $1 \times 10^{-5}$  cm/sec may be used in lieu of the one (1) foot drainage layer must be placed directly on the intermediate cover to facilitate landfill gas control;

~~6.1.5.a.A.(b)~~ 6.1.e.1.A.2. Clay Cap Layer.

A cap consisting of a uniform and compacted one (1) foot layer of clay that is no more permeable than  $1 \times 10^{-7}$  cm/s must be placed and graded over the entire surface of each final lift in six (6) inch lifts. The director may, in the issued permit, approve the use of a synthetic material in



lieu of the layer of clay;

~~6.1.5.a.A.(b)(A)~~

6.1.e.1.A.2.1. An alternative clay cap layer may be approved by the director on a site-specific basis. In no case may this (infiltration) layer be comprised of a less than a minimum of 18 inches of earthen material that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than  $1 \times 10^{-5}$  cm/sec, whichever is less, and

~~6.1.5.a.A.(e)~~ 6.1.e.1.A.3.

Drainage Layer.

A one (1) foot drainage layer that is more permeable than  $1 \times 10^{-3}$  cm/s or a geocomposite drainage layer having a permeability of at least  $1 \times 10^{-3}$  cm/sec may be used in lieu of the one (1) foot drainage layer, capable of transmitting flow and preventing erosion must be placed over the cap.

~~6.1.5.a.A.(d)~~ 6.1.e.1.A.4.

Vegetative Cover Layer.

A uniform and compacted layer of soil that is at least two (2) feet in thickness and capable of supporting vegetation must be placed over the drainage layer. The erosion layer portion of the drainage layer must consist of a minimum six (6) inches of earthen material that is capable of sustaining native plant growth.

~~6.1.5.a.B.~~ 6.1.e.1.B. Placement of

Final Cover.

The operator must place final cover within six (6) months after disposal in the final lift ceases or as soon thereafter as weather permits, unless the permittee obtains written approval from the director allowing a later period based on a demonstration that a later period is necessary to protect the cap and drainage layer from differential settlement of waste at the facility.

The director will not allow a later period unless, at a minimum, delayed installation will not cause or allow any violations of any provision of this rule, or based on a demonstration that a later period is necessary to protect the cap and drainage layer from differential settlement of waste at the facility.

~~6.1.5.a.C.~~ 6.1.e.1.C. Surface

water run-on must be diverted around all areas used for waste disposal to limit the potential for erosion of the cover soils and increased infiltration. Drainage swales conveying surface water runoff over previous waste disposal areas must be lined with a minimum thickness of two (2) feet of earthen material or a layer of synthetic material acceptable to the director.

~~6.1.5.a.D.~~ 6.1.e.1.D. The grade of

the final surface of the facility must not be less than three percent (3%) nor more than twenty-five percent (25%) unless otherwise approved by the director as a part of the issued permit. Long slopes must incorporate runoff control measures and terracing in order to minimize erosion. For sites having a natural slope greater than twenty-five percent (25%), a slope up to thirty-three percent (33%) may be considered acceptable if terracing is incorporated at least every twenty (20) feet of vertical distance with runoff control.

~~6.1.5.a.E.~~ 6.1.e.1.E. Within

ninety (90) days after the placement of final cover, the permittee must complete seeding, fertilizing, and mulching of the finished surface. The seed type and amount of fertilizer applied must be selected depending on the type and quality of topsoil and compatibility with both native vegetation and the final use. Unless otherwise approved by the director in writing, seed mixture and application rates must be in accordance with ~~section subdivision 4.5.6~~ 4.5.f of this rule.

~~6.1.5.a.F.~~ 6.1.e.1.F. Additional

information may be required at the discretion of the director.

~~6.1.5.a.G. 6.1.e.1.G.~~ A closure plan for solid waste facilities other than landfills must include the requirements of ~~sections subparagraphs 6.1.5.a.D 6.1.e.1.D and 6.1.5.a.E 6.1.e.1.E~~ of this rule and any other requirement specified by the director.

~~6.1.5.b. 6.1.e.2.~~ Alternative Final Cover Design

The director may approve an alternative final cover design that includes:

~~6.1.5.b.A. 6.1.e.2.A.~~ An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in ~~section subpart 6.1.5.a.A.(b)(A) 6.1.e.1.A.1.(a)~~ and

~~6.1.5.b.B. 6.1.e.2.B.~~ An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in ~~section part 6.1.5.a.A.(d) 6.1.e.1.A.4.~~

~~6.1.5.c. 6.1.e.3.~~ The permittee must prepare a written closure plan that describes the steps necessary to close all portions of the SWLF at any point during its active life in accordance with the cover design requirements in ~~section paragraph 6.1.5.a 6.1.e.1 or 6.1.5.b 6.1.e.2,~~ as applicable.

~~6.1.5.c.A. 6.1.e.3.A.~~ The closure plan, at a minimum, must include the following information:

~~6.1.5.c.A.(a) 6.1.e.3.A.1.~~ A description of the final cover, designed in accordance with ~~section paragraph 6.1.5.a 6.1.e.1~~ and the methods and procedures to be used to install the cover;

~~6.1.5.c.A.(b) 6.1.e.3.A.2.~~ An estimate of the largest area of the SWLF ever requiring a final cover as required under ~~section paragraph 6.1.5.a 6.1.e.1~~ at any time during the active life;

~~6.1.5.c.A.(c) 6.1.e.3.A.3.~~ An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and

~~6.1.5.c.A.(d) 6.1.e.3.A.4.~~ A schedule for completing all activities necessary to satisfy the closure criteria in section 6 of this rule.

~~6.1.5.d. 6.1.e.4.~~ The permittee must notify the director that a closure plan has been prepared and placed in the operating record no later than the effective date of this rule, or by the initial receipt of waste, whichever is later.

~~6.1.5.e. 6.1.e.5.~~ Prior to beginning closure of each portion of the SWLF as specified in ~~section paragraph 6.1.5.f 6.1.e.6~~ a permittee must notify the director that a notice of the intent to close the portion of the SWLF has been placed in the operations record.

~~6.1.5.f. 6.1.e.6.~~ The permittee must begin closure activities of each portion of the SWLF no later than 30 days after the date on which the SWLF receives the known final receipt of wastes or, if the SWLF has remaining capacity and there is a reasonable likelihood that the SWLF will receive additional wastes, no later than one year after the most recent receipt of wastes.

~~6.1.5.f.A. 6.1.e.6.A.~~ Extensions beyond the one-year deadline for beginning closure may be granted by the director if the permittee demonstrates that the SWLF has the capacity to receive additional wastes and the permittee has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed portion of the SWLF.

~~6.1.5.g. 6.1.e.7.~~ The permittee of all SWLFs must complete closure activities of each SWLF in accordance with the closure plan within 180 days following the beginning of closure as specified in ~~section paragraph 6.1.5.f 6.1.e.6~~ of



this rule

~~6.1.5.g.A.~~ 6.1.e.7.A. Extensions of the closure period may be granted by the director if the permittee demonstrates that closure will, of necessity, take longer than 180 days and he or she has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed portion of the SWLF.

~~6.1.6.~~ 6.1.f. Final Use at Landfills.

The following activities are prohibited at closed landfills unless specifically approved by the director in writing:

~~6.1.6.a.~~ 6.1.f.1. Use of the facility for agricultural purposes;

~~6.1.6.b.~~ 6.1.f.2. Establishment or construction of any buildings; or

~~6.1.6.c.~~ 6.1.f.3. Excavation of the final cover or any waste materials.

~~6.1.7.~~ 6.1.g. Certification by Registered Professional Engineer.

~~6.1.7.a.~~ 6.1.g.1. Following closure of each portion of the SWLF, all closure activities must be inspected and approved by a registered professional engineer prior to the application to the director for closure approval. The permittee must also notify the director, in writing of this certification, signed by an independent registered professional engineer and approved by the director, verifying that closure has been completed in accordance with the closure plan. A copy of all related information must be retained in the facility operating record.

~~6.1.8.~~ 6.1.h. Closure Approval.

Upon completion of requirements related to closure, the director will issue a final closure approval. The date of the director's final closure

approval must be the date of commencement of the post-closure bond liability period.

6.2. Inactive Status.

Upon application to the director, a permittee may request inactive status for a period not to exceed six (6) months. To qualify for inactive status, the permittee must:

~~6.2.1.~~ 6.2.a. Intermediate Cover.

Demonstrate that all solid wastes are covered by at least one (1) foot of intermediate cover.

~~6.2.2.~~ 6.2.b. Final Cover.

Demonstrate that all areas where solid waste disposal is complete have been covered with final cover as described in ~~section~~ subparagraph 4.6.2.b.C 4.6.b.2.C of this rule.

~~6.2.3.~~ 6.2.c. Revegetation.

Demonstrate that all disturbed areas have been seeded in accordance with the revegetation plans specified by ~~section~~ subdivision 4.5.6 4.5.f of this rule.

~~6.2.4.~~ 6.2.d. Restricted Access.

Restrict access to the area.

~~6.2.5.~~ 6.2.e. Maintenance of Leachate Control.

Demonstrate that leachate collection and treatment will be maintained.

~~6.2.6.~~ 6.2.f. Deed Notation.

Demonstrate that notations have been made in permanent deed records in the County Clerk's Office that the site has been used as a solid waste facility.

~~6.2.7.~~ 6.2.g. Other Assurances.

Provide any other assurance specified by the director.

### 6.3. Post-Closure Care Requirements.

Following closure of each portion of the SWLF, the permittee must conduct post-closure care as required by the permit. Post-closure care must continue for up to thirty (30) years after final closure of areas unless otherwise modified by the director and must consist of the following:

#### ~~6.3.1:~~ 6.3.a. Monitoring.

Monitoring must continue as specified in the monitoring plan required by the permit.

#### ~~6.3.2:~~ 6.3.b. Repair of Settlement.

Any settling of solid waste which occurs up to ten (10) years of the date of final closure, causing ponding of waters in areas of solid waste deposits, must be repaired promptly. Such repairs must include any necessary regrading, additions of fill material, and revegetation of settled areas, while maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;

#### ~~6.3.3:~~ 6.3.c. Repair of Cover Material.

Any cracking or erosion of cover material which occurs and may cause waters to enter solid waste deposits must be repaired immediately. Such repairs must include any necessary regrading, additions of cover material, and revegetation to eliminate such cracks or eroded areas.

#### ~~6.3.4:~~ 6.3.d. Site Monitoring.

Further disposal of solid waste at a closed solid waste facility is prohibited. The closed solid waste facility must be monitored by the permittee,

at a minimum frequency of once each month during the post-closure period, to ensure that solid waste deposits and vandalism do not occur at the closed solid waste facility. Any solid waste deposited at the closed solid waste facility during the post-closure period must be promptly removed and disposed of at an approved solid waste facility. Evidence of disease vectors must be treated promptly.

~~6.3.4.a:~~ 6.3.d.1. Maintaining and operating the leachate collection system in accordance with the requirements in ~~section paragraph 4.5.4.a~~ 4.5.d.1.

~~6.3.4.a.A:~~ 6.3.d.1.A. The director may allow the permittee to stop managing leachate if the permittee demonstrates that leachate no longer poses a threat to human health and the environment;

~~6.3.4.b:~~ 6.3.d.2. Monitoring the groundwater in accordance with the requirements of ~~section subsection 4.11~~ and maintaining the groundwater monitoring system, if applicable; and

~~6.3.4.c:~~ 6.3.d.3. Maintaining and operating the gas monitoring system in accordance with the requirements of ~~section subsection 4.10~~ of this rule.

#### ~~6.3.5:~~ 6.3.e. Length of the Post-Closure Care Period

The length of the post-closure care period may be:

~~6.3.5.a:~~ 6.3.e.1. Decreased by the director if the permittee demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the director; or

~~6.3.5.b:~~ 6.3.e.2. Increased by the director, if the director determines that the lengthened period is necessary to protect human health and the environment.

~~6.3.6.~~ 6.3.f. Post-Closure Plan .

The permittee of all SWLFs must prepare a written post-closure plan that includes, at a minimum, the following information:

~~6.3.6.a.~~ 6.3.f.1. A description of the monitoring and maintenance activities required in ~~section~~ subsection 6.3 for each SWLF, and the frequency at which these activities will be performed;

~~6.3.6.b.~~ 6.3.f.2. Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and

~~6.3.6.c.~~ 6.3.f.3. A description of the planned uses of the property during the post-closure period.

~~6.3.6.e.A.~~ 6.3.f.3.A. Post-closure use of the property must not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this rule.

~~6.3.6.e.B.~~ 6.3.f.3.B. The director may approve any other disturbance if the permittee demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.

~~6.3.7.~~ 6.3.g. The permittee must notify the director that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this rule, or by the initial receipt of waste, whichever is later.

~~6.3.7.a.~~ 6.3.g.1. Following completion of the post-closure care period for each portion of the SWLF, the permittee must notify the director that a certification, signed by

an independent registered professional engineer and approved by the director, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.

6.4. Final Post-Closure Inspection.

~~6.4.1.~~ 6.4.a. If the permittee of a solid waste facility believes that post-closure requirements have been met, the permittee may file a request for a final post-closure inspection with the director.

~~6.4.2.~~ 6.4.b. Upon a request for a final post-closure inspection, the director will inspect the facility to verify that final post-closure has been completed as follows:

~~6.4.2.a.~~ 6.4.b.1. The applicable operating requirements of the Solid Waste Management Act and all other environmental laws of the State of West Virginia, the rules and regulations of the West Virginia Division of Environmental Protection, all terms and conditions of the facility permit(s), including the approved closure plan, and all orders issued by the director have been complied with.

~~6.4.2.b.~~ 6.4.b.2. No further remedial action, maintenance, or other activity by the permittee is necessary to continue compliance with the Solid Waste Management Act, all other environmental laws of the State of West Virginia, the rules and regulations of the Division, orders issued by the director, and the terms and conditions of the permit and the approved closure plan.

~~6.4.2.c.~~ 6.4.b.3. The facility is not causing, and will not cause, any adverse effects on the environment, and is not causing a nuisance.

~~6.4.3.~~ 6.4.c. Upon a finding by the director that the facility is in compliance with all factors listed in ~~section~~ subsection 6.4 of this rule, the permittee will be eligible for bond release

pursuant to ~~section~~ subsection 6.6 of this rule.

~~6.4.4.~~ 6.4.d. Upon a finding by the director that the facility is not in compliance with all the factors listed in ~~section~~ subsection 6.4 of this rule, the director will initiate proceedings for bond forfeiture pursuant to ~~section~~ subsection 6.5 of this rule.

#### 6.5. Bond Forfeiture.

##### ~~6.5.1.~~ 6.5.a. Procedure.

If the director declares a bond or any other form of financial assurance provided by the permittee forfeited, the director will:

~~6.5.1.a.~~ 6.5.a.1. Send written notification to the principal, to the bond surety, and to every county or regional solid waste authority in the area that utilizes the facility; of the director's determination to declare the bond forfeit and the reasons for the forfeiture;

~~6.5.1.b.~~ 6.5.a.2. Advise the principal and surety of the right to appeal to circuit court; and

~~6.5.1.c.~~ 6.5.a.3. Proceed to collect on the bond as provided by applicable laws for the collection of defaulted bonds or other debts.

##### ~~6.5.2.~~ 6.5.b. Collateral Bonds and other Forms of Financial Assurance.

If the director declares a collateral bond forfeited, the director will pay, or direct the state treasurer to pay, the collateral funds into an appropriate Solid Waste Fund. If upon proper demand and presentation, the banking institution or other person or municipality which issued the collateral refuses to pay the Division the proceeds of a collateral undertaking such as a certificate of deposit, letter of credit or government negotiable bond, the director will take appropriate steps to collect the proceeds.

##### ~~6.5.3.~~ 6.5.c. Surety Bond.

If the director declares a surety bond forfeited, he or she will certify the same to the Office of Attorney General which will proceed to enforce and collect the amount forfeited, which will, upon collection, be paid into an appropriate Solid Waste Fund.

##### ~~6.5.4.~~ 6.5.d. Use of Funds.

Monies received from the forfeiture of bonds, and interest accrued, will be used first to accomplish final closure of, and to take steps necessary and proper to remedy and prevent adverse environmental effects from, the solid waste facilities upon which liability was charged on the bonds. Any monies remaining after such final closure, post-closure and all necessary remedial actions have been accomplished must be deposited in the Solid Waste Enforcement Fund that was established pursuant to W. Va. Code §22-15-11(h)(1).

#### 6.6. Release of Bonds.

##### ~~6.6.1.~~ 6.6.a. Request.

An operator seeking a release of a bond previously submitted to the director must file a written request with the director for release of the bond amount after inspection or after posting a replacement bond in accordance with the provisions of ~~section~~ subsection 3.13 of this rule.

##### ~~6.6.2.~~ 6.6.b. Application.

The application for bond release must contain the following:

~~6.6.2.a.~~ 6.6.b.1. The name of the permittee and identification of the facility for which bond release is sought;

~~6.6.2.b.~~ 6.6.b.2. The total amount of the bond in effect for the facility; and

~~6.6.2.c:~~ 6.6.b.3. Other information that may be required by the director.

~~6.6.2.d:~~ 6.6.b.4. The release or forfeiture of a bond by the director does not constitute a waiver or release of other liability provided in law, nor does it abridge or alter rights of action or remedies of a person or municipality now or hereafter existing in equity or under common law or statutory law, both criminal and civil.

~~6.6.2.e:~~ 6.6.b.5. The director may grant bond releases immediately upon final closure, for facilities other than landfills, if it is clearly demonstrated that further monitoring, restoration, or maintenance is not necessary to protect the public health, safety and welfare, and the environment.

#### 6.7. Preservation of Remedies.

Remedies provided or authorized by law for a violation of applicable federal or state statutes, the regulations or rules promulgated thereunder, orders issued by the director, or the terms and conditions of permits are expressly preserved. Nothing in this rule is an exclusive penalty or remedy for such a violation. No action taken under this rule waives or impairs another remedy or penalty provided in law or equity.

#### ~~§47-38-7.~~ §33-1-7. Open Dumps.

##### 7.1. Prohibitions.

~~7.1.1:~~ 7.1.a. No person may create or operate an open dump.

~~7.1.2:~~ 7.1.b. No person may contribute additional solid waste to an open dump at any time.

~~7.1.3:~~ 7.1.c. Except as provided in ~~sections subdivisions~~ 7.1.4 7.1.d and ~~7.1.5~~ 7.1.e of this rule, no landowner may allow an open dump to exist on his or her property unless such open

dump is under a compliance schedule approved by the director.

~~7.1.4:~~ 7.1.d. An open dump operated prior to April 1, 1988 by a landowner or tenant for the disposal of solid waste generated by the landowner or tenant at his or her residence or farm is not deemed to constitute a violation of ~~section subdivision~~ 7.1.3 7.1.c of this rule if such open dump did not constitute a violation of law on January 1, 1988.

~~7.1.4.a:~~ 7.1.d.1. After April 1, 1988, no additional solid waste may be contributed to an open dump operated by a landowner or tenant for the disposal of solid waste generated by the landowner or tenant at his or her residence or farm.

~~7.1.4.b:~~ 7.1.d.2. The landowner or tenant who operated an open dump for the disposal of solid waste generated at his or her residence or farm must, at a minimum, cover the accumulated waste with two (2) feet of topsoil.

~~7.1.5:~~ 7.1.e. An unauthorized dump created by unknown persons is not deemed to constitute a violation of ~~section subdivision~~ 7.1.3 7.1.c of this rule and the owner of the land on which such dump is located is not liable for unauthorized dumping unless he refuses to cooperate with the Division in stopping the dumping. Cooperation with the Division may include, but is not limited to, the following:

~~7.1.5.a:~~ 7.1.e.1. The posting of signs stating that dumping is illegal;

~~7.1.5.b:~~ 7.1.e.2. The erection of fencing to surround the accumulated waste;

~~7.1.5.c:~~ 7.1.e.3. Surveillance of the open dumping areas to determine the identity of contributors to such open dumps;

~~7.1.5.d:~~ 7.1.e.4. The removal and keeping of certain indications of ownership as

contemplated by W. Va. Code §20-7-26(b); or

~~7.1.5.e.~~ 7.1.e.5. Testimony before a judicial officer regarding the identity of contributors to the dump.

~~7.1.6.~~ 7.1.f. Open burning of solid waste is prohibited.

7.2. Protection of the Environment and the Public.

~~7.2.1.~~ 7.2.a. Any site at which the following protective measures have not been instituted shall be classified as an open dump:

~~7.2.1.a.~~ 7.2.a.1. Measures must be taken to prevent the discharge of pollutants from the accumulated waste into the waters of the State (e.g., measures to prevent runoff into surface water bodies or the infiltration of leachates to local aquifers);

~~7.2.1.b.~~ 7.2.a.2. Measures must be taken to impede the access of disease vectors to the accumulated waste (e.g., the application of cover material at appropriate frequencies or other techniques approved in writing by the director);

~~7.2.1.c.~~ 7.2.a.3. Measures must be taken to prevent the introduction of hazardous or infectious materials to the accumulated waste;

~~7.2.1.d.~~ 7.2.a.4. Measures must be taken to reduce the risk of fire in the accumulated waste (e.g., venting measures to reduce the concentration of explosive gases generated by the waste);

~~7.2.1.e.~~ 7.2.a.5. Measures must be taken to limit public access to the accumulated waste (e.g., the erection of fencing to surround the accumulated waste);

~~7.2.1.f.~~ 7.2.a.6. Measures must be taken to prevent adverse impacts to area wildlife, particularly with regard to the destruction or

adverse modification of habitat critical to any endangered or threatened species of animal or plant; and

~~7.2.1.g.~~ 7.2.a.7. Any other similar measures specified by the director in Division policy, regulation, or rule.

7.3. Schedules of Compliance for Open Dumps.

~~7.3.1.~~ 7.3.a. Schedules of compliance for open dumps will contain a sequence of enforceable actions.

~~7.3.2.~~ 7.3.b. Schedules of compliance for open dumps may not exceed a total time period for all compliance actions of two (2) years from the date of issuance.

7.4. Enforcement.

~~7.4.1.~~ 7.4.a. If the director has reasonable cause to believe that a potential for environmental or aesthetic degradation or for harm to the health, safety, or welfare of the public exists at any open dump, he or she may require any person responsible for that open dump to conduct such tests or furnish such information as may be reasonably required to determine whether that dump is or may be causing said degradation or harm.

~~7.4.2.~~ 7.4.b. The Division may conduct any test deemed necessary by the director in making an investigation or determination of a potential for environmental or aesthetic degradation or for harm to the health, safety, or welfare of the public exists at any open dump.

~~7.4.3.~~ 7.4.c. The director may perform, or require a person by order to perform, any and all acts necessary to carry out the provisions of the Act, regulations, or rule with regard to an open dump.

~~7.4.3.a.~~ 7.4.c.1. Any person having



an interest which is or may be affected or who is aggrieved by any order of the director with regard to an open dump may appeal such order to the Environmental Quality Board pursuant to the provisions of W. Va. Code §22B-3-1 et seq.

7.5. Cooperation with the State Division of Highways.

~~7.5.1.~~ 7.5.a. Roadway Specifications.

Standards and design specifications for roadways which provide access to municipal solid waste facilities, as promulgated by the commissioner of the West Virginia Division of Highways, are hereby incorporated by reference. A municipal solid waste facility permit may be suspended or revoked if the owner or operator fails to comply with such roadway specifications.

~~7.5.2.~~ 7.5.b. Waste-In-Transit Inspections.

The director may designate authorized representatives to coordinate with authorized representatives of the commissioner of the West Virginia Division of Highways in conducting inspections of solid waste in transit. Such waste-in-transit inspections will be conducted at weigh stations or other designated sites throughout the state pursuant to rules or regulations promulgated by the Division of Highways.

7.6. Cooperation with the State Tax and Revenue Division.

~~7.6.1.~~ 7.6.a. The Division will cooperate with the State Tax Commissioner in the handling of proceeds received by the State Tax and Revenue Division from fees collected pursuant to the Act.

7.7. Cooperation with the State Health Division.

~~7.7.1.~~ 7.7.a. The Division will cooperate with the West Virginia Division of Health in

assessing the potential for contamination of public water supplies from any proposed or approved solid waste facility, open dump, or other property where solid waste is present.

7.8. Cooperation with County and Regional Solid Waste Authorities.

~~7.8.1.~~ 7.8.a. The Division will provide such technical assistance concerning the handling and disposal of solid waste to each county and regional solid waste authority as is reasonable and practicable with existing Division resources and appropriations available for such purposes.



## 33CSR1

APPENDIX I  
CONSTITUENTS FOR PHASE I DETECTION MONITORING<sup>1</sup>

## GROUP A:

## Inorganic Constituents:

COMMON NAME <sup>2</sup>	CAS RN <sup>3</sup>
Acidity.....	(Total)
Aluminum.....	(Total)
Alkalinity.....	(Total)
Ammonia Nitrogen.....	(Total)
Antimony.....	(Total)
Arsenic.....	(Total)
Barium.....	(Total)
Beryllium.....	(Total)
Bicarbonates.....	(mg/l)
Boron.....	(Total)
Cadmium.....	(Total)
Chlorides.....	(Total)
Chromium.....	(Total)
Cobalt.....	(Total)
COD.....	(mg/l)
Copper.....	(Total)
Cyanide (Free).....	(Total)
Dissolved Manganese.....	(Total)
Iron.....	(Total)
Lead.....	(Total)
Magnesium.....	(Total)
Mercury.....	(Total)
Molybdenum.....	(Total)
Nickel.....	(Total)
Nitrate.....	(Total)
pH.....	(Std. Units)
Potassium.....	(Total)
Selenium.....	(Total)
Silver.....	(Total)
Sodium.....	(Total)
Specific Conductivity.....	(Micro Ohms)
Sulfate.....	(Total)
TDS.....	(mg/l)
Thallium.....	(Total)
TOC.....	(mg/l)
Total Phenolic Materials.....	(Total)

## 33CSR1

TSS.....(Total)  
 Turbidity.....(Total)  
 Vanadium.....(Total)  
 Zinc.....(Total)

In addition to the above, the following parameters should be analyzed:  
 Temperature, hardness, (BOD-5day), flouride, hexavalent chromium and  
 calcium.

## GROUP B:

## Organic Constituents:

COMMON NAME <sup>2</sup>	CAS RN <sup>3</sup>
Acetone.....	67-64-1
Acrylonitrile.....	107-13-1
Benzene.....	71-43-2
Bromochloromethane.....	74-97-5
Bromodichloromethane.....	75-27-4
Bromoform; Tribromomethane.....	75-25-2
Carbon disulfide.....	75-15-0
Carbon tetrachloride.....	56-23-5
Chlorobenzene.....	108-90-7
Chloroethane; Ethyl chloride.....	75-00-3
Chloroform; Trichloromethane.....	67-66-3
Dibromochloromethane; Chlorodibromomethane.....	124-48-1
1,2-Dibromo-3-chloropropane; DBCP.....	96-12-8
1,2,-Dibromoethane; Ethylene dibromide; EDB.....	106-93-4
o-Dichlorobenzene; 1,2-Dichlorobenzene.....	95-50-1
p-Dichlorobenzene; 1,4-Dichlorobenzene.....	106-46-7
trans-1,4-Dichloro-2-butene.....	110-57-6
1,1-Dichloroethane; Ethylidene chloride.....	75-34-3
1,2-Dichlorethanel Ethylene dichloride.....	107-06-2
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.....	75-35-4
cis-1,2-Dichlorethylene; cis-1,2- Dichloroethene.....	156-59-2
trans-1,2-Dichloroethylene; trans-1,2- Dichloroethene.....	156-60-5
1,2-Dichloropropane; Propylene dichloride.....	78-87-5
cis-1,3-Dichloropropene.....	10061-01-5
trans-1,3-Dichloropropene.....	10061-02-6
Ethylbenzene.....	100-41-4
2-Hexanone; Methyl butyl ketone.....	591-78-6
Methyl bromide; Bromomethane.....	74-83-9
Methyl chloride; Chloromethane.....	74-87-3

## 33CSR1

Methylene bromide; Dibromomethane.....	74-95-3
Methylene chloride; Dichloromethane.....	75-09-2
Methyl ethyl ketone; MEK; 2-Butanone.....	78-93-3
Methyl iodide; Iodomethane.....	74-88-4
4-Methyl-2-pentanone; Methyl isobutyl ketone.....	108-10-1
Styrene.....	100-42-5
1,1,1,2-Tetrachloroethane.....	630-20-6
1,1,2,2-Tetrachloroethane.....	79-34-5
Tetrachloroethylene; Perchloroethylene.....	127-18-4
Toluene.....	108-88-3
1,1,1-Trichloroethane; Methyichloroform.....	71-55-6
1,1,2-Trichloroethane.....	79-00-5
Trichloroethylene; Trichloroethene.....	79-01-6
Trichlorofluoromethane; CFC-11.....	75-69-4
1,2,3-Trichloropropane.....	96-18-4
Vinyl acetate.....	108-05-4
Vinyl chloride.....	75-01-4
Xylenes.....	1330-20-7

1. This list contains volatile organics for which possible analytical procedures provided in EPA Report SW-846 "Test Methods for Evaluating Solid Waste," third edition, November 1986, as revised December 1987, includes Method 8260; and metals for which SW-846 provides either Method 6010 or a method from the 7000 series of methods.

2. Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

3. Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

## 33CSR1

APPENDIX II  
 PHASE II ASSESSMENT MONITORING  
 HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS<sup>1</sup>

COMMON NAME <sup>2</sup> UG/L) <sup>6</sup>	CAS RN <sup>3</sup>	CHEMICAL ABSTRACTS SERVICE INDEX NAME <sup>4</sup>	SUGGESTED METHODS <sup>5</sup>	PQL
Acenaphthene.....	83-32-9..	Acenaphthylene, 1,2-dihydro-.....	8100....	200
			8270....	10
Acenaphthylene.....	208-96-8..	Acenaphthylene.....	8100....	200
			8270....	10
Acetone.....	67-64-1..	2-Propanone.....	8260....	100
Acetonitrile;. Methyl cyanide.....	75-05-8..	Acetonitrile.....	8015....	100
Acetophenone.....	98-86-2..	Ethanone, 1-phenyl.....	8270....	10
2-Acetylamino fluorene;. 2-AAF.....	53-96-3..	Acetamide, N-9H-fluoren-2-yl-.....	8270....	20
Acrolein.....	107-02-8..	2-Propenal.....	8030.....	5
			8260....	100
Acrylonitrile.....	107-13-1..	2-Propenenitrile.....	8030.....	5
			8260....	200
Aldrin.....	309-00-2..	1,4,5,8-Dimethanonaphthalene,.....	8080..	0.05
		1,2,3,4,10,10-hexachloro-	8270....	10
		1,4,4a,5,8,8a-hexahydro-		
		(1a,4a,4aB,5a,8a,8aB) -		
Allyl chloride.....	107-05-1..	1-Propene, 3-chloro-.....	8010.....	5
			8260....	10
4-Aminobiphenyl.....	92-67-1..	{1,1 <sup>1</sup> --Biphenyl}-4-amine.....	8270....	20
Anthracene.....	120-12-7..	Anthracene.....	8100....	200

## 33CSR1

		8270.....10
Antimony..... (Total) ..	Antimony.....	6010....300
		7040...2000
		7041.....30
 Arsenic..... (Total) ..	 Arsenic.....	 6010....500
		7060... .10
		7061.. .20
Barium..... (Total) ..	Barium.....	6010....20
		7080...1000
Benzene.....71-43-2..	Benzene.....	8020.....2
		8021... 0.1
		8260.....5
Benzo (a) anthracene;Benzathracene.56-55-3..	Benz (a) anthracene.....	8100....200
		8270.....10
Benzo (b) fluoranthene.....205-99-2..	Benz (e) acephenanthrylene.....	8100....200
		8270.....10
Benzo (k) fluoranthene.....207-08-9..	Benzo (k) fluoranthene.....	8100....200
		8270.....10
Benzo (ghi) perylene.....191-24-2..	Benzo (ghi) perylene.....	8100....200
		8270.....10
Benzo (a) pyrene.....50-32-8..	Benzo) a) pyrene.....	8100....200
		8270.....10
Benzyl alcohol.....100-51-6..	Benzenemethanol.....	8270....20
Beryllium.....Total) ..	Beryllium.....	6010.....3
		7090.....50
		7091.....2
alpha-BHC.....319-84-6..	Cyclohexane, 1,2,3,4,5,6- .....	8080... 0.05

## 33CSR1

	hexachloro-, (1a,2a,3B,4a,5B,6B) .8270.....10	
beta-BHC.....319-85-7..	Cyclohexane, 1,2,3,4,5,6-.....8080...0.05	
	hexachloro-, (1a,2a,3B,4a,5B,6B) .8270.....20	
delta-BHC.....319-86-8..	Cyclohexane, 1,2,3,4,5,6-.....8080...0.1	
	hexachloro-, (1a,2a,3a,4B,5a,6B) .8270.....20	
gamma-BHC;Lindane.....58-89-9..	Cyclohexane, 1,2,3,4,5,6-.....8080.. 0.05	
	hexachloro-, (1a,2a,3B,4a, 5a,6B) 8270.....20	
Bis(2-chloroethoxy)methane.....111-91-1..	Ethane, 1,1 <sup>1</sup> -{methylenebis.....8110.....5	
	(oxy) }bis{2-chloro 8270.....10	
Bis(2-chloroethyl) ether;.....111-44-4..	Ethane, 1,1-oxybis{2-chloro-.....8110.....3	
Dichlor-oethyl ether	8270.....10	
Bis(2-chloro 1-methylethyl).....108-60-1..	Propane, 2,2-oxybis{1-chloro-.....8110.....10	
ether; 2,2 <sup>1</sup> -Dichlorodiiso-	8270.....10	
propyl ether; DCIP See Note 7.		
Bis(2-ethylhexyl)phthalate.....117-81-7..	1,2-Benzenedicarboxylic acid,.....8060.....20	
	bis(2-ethylhexyl) ester	
Bromochloromethane;.....74-97-5..	Methane, bromochloro-.....8021... 0.1	
Chloro-bromomethane	8260.....5	
Bromodichloromethane;.....75-27-4..	Methane, bromodichloro-.....8010.....1	
Dibromochloromethane	8021... 0.2	
	8260.....5	
Bromoform;Tribromomethane.....75-25-2..	Methane, tribromo.....8010.....2	
	8021.....15	
	8260.....5	
4-Bromophenyl.phenyl ether.....101-55-3..	Benzene, 1-bromo-4-phenoxy.....8110.....25	
	8270.....10	

## 33CSR1

Butyl benzyl phthalate; Benzyl...	85-68-7..1,2-Benzenedicarboxylic acid,.....	8060.....	5
butyl phthalate	butyl phenylmethyl ester	8270	10
Cadmium.....	(Total) ..Cadmium.....	6010.....	40
		7130.....	50
		7131.....	1
Carbon disulfide.....	75-15-0..Carbon disulfide.....	8260.....	100
Carbon tetrachloride.....	56-23-5..Methane, tetrachloro-.....	8010.....	1
		8021...	0.1
		8260.....	10
Chlordane.....	See Note 8..4,7-Methano-1H-indene,.....	8080...	0.1
	1,2,4,5,6,7,8,8-octachloro-	8270.....	50
	2,3,3a,4,7,7a-hexahydro-		
p-Chloroaniline.....	106-47-8..Benzenamine, 4-chloro.....	8270.....	20
Chlorobenzene.....	108-90-7..Benzene, chloro-.....	8010.....	2
		8020.....	2
		8021...	0.1
		8260.....	5
Chlorobenzilate.....	510-15-6..Benzeneacetic acid, 4-chloro-a-....	8270.....	10
	(4-chlorophenyl)-a-		
	hydroxyethyl ester		
p-Chloro-m-cresol;.....	59-50-7..Phenol, 4-chloro-3-methyl-.....	8040.....	5
4-Chloro-3-methylphenol		8270.....	20
Chloroethane;Ethyl chloride.....	75-00-3..Ethane, chloro-.....	8010.....	5
		8021.....	1
		8260.....	10
Chloroform,Trichloromethane.....	67-66-3..Methane, trichloro-.....	8010...	0.5
		8021...	0.2



## 33CSR1

	8260.....5
2-Chloronaphthalene.....91-58-7..Naphthalene, 2-chloro-.....	8120.....10
	8270.....10
2-Chlorophenol.....95-57-8..Phenol, 2-chloro-.....	8040.....5
	8270.....10
4-Chlorophenyl phenyl ether....7005-72-3..Benzene, 1-chloro-4-phenoxy-.....	8110.....40
	8270.....10
Chloroprene.....126-99-8..1,3-Butadiene, 2-chloro-.....	8010.....50
	8260.....20
Chromium.....(Total) ..Chromium.....	6010.....70
	7190....500
	7191.....10
Chrysene.....218-01-9..Chrysene.....	8100....200
	8270.....10
Cobalt.....(Total) ..Cobalt.....	6010.....70
	7200....500
	7201.....10
Copper.....(Total) ..Copper.....	6010.....60
	7210....200
	7211.....10
m-Cresol; 3-methylphenol.....108-39-4..Phenol, 3-methyl.....	8270.....10
o-Cresol; 2-methylphenol.....95-48-7..Phenol, 2-methyl.....	8270.....10
p-Cresol; 4-methylphenol.....106-44-5..Phenol, 4-methyl.....	8270.....10
Cyanide.....57-12-5..Cyanide.....	9010....200
2,4-D; 2,4-Dichloro-.....94-75-7..Acetic acid (2,4-dichloro phenoxy)	8150.....10
phenoxyacetic acid	
4,4 <sup>1</sup> -DDD.....72-54-8..Benzene 1,1 <sup>1</sup> -(2,2-dichloro-.....	8080... 0.1
ethyldiene)bis{4-chloro-	8270.....10

## 33CSR1

4,4 <sup>1</sup> -DDE.....	72-55-9..Benzene 1,1 <sup>1</sup> -(dichloro-.....	8080... 0.05
	ethylenylidene)bis{4-chloro-	8270.....10
4,4 <sup>1</sup> -DDT.....	50-29-3..Benzene 1,1 <sup>1</sup> -(trichloro-.....	8080... 0.1
	ethylenylidene)bis	8270.....10
	{4-chloromethylethyl)	
Diallate.....	2303-16-4..Carbamothioic acid,.....	8270.....10
	bis(1-methylethyl)-S-(2,3-	
	dichloro- 2-propenyl) ester	
Dibenz{a,h}anthracene.....	53-70-3..Dibenz{a,h}anthracene.....	8100....200
		8270.....10
Dibenzofuran.....	132-64-9..Dibenzofuran.....	8270.....10
Dibromochloromethane;.....	124-48-1..Methane, dibromochloro-.....	8010.....1
Chlorodibromomethane		8021... 0.3
		8260.....5
1,2-Dibromo-.....	96-12-8..Propane, 1,2-dibromo-3-chloro-.....	8011....0.1
3-chloropropane;DBCP		8021....30
		8260.....25
1,2-Dibromoethane;.....	106-93-4..Ethane, 1,2-dibromo.....	8011... 0.1
Ethylene dibromide;EDB		8021....10
		8260.....5
Di-n-butyl phthalate.....	84-74-2..1,2-Benzenedicarboxylic acid,.....	8060.....5
	dibutyl ester	8270.....10
o-Dichlorobenzene;.....	95-50-1..Benzene, 1,2-dichloro-.....	8010.....2
1,2-Dichlorobenzene		8020.....5
		8021... 0.5
		8120.....10
		8260.....5
		8270.....10

## 33CSR1

m-Dichlorobenzene;.....541-73-1..Benzene, 1,3-Dichloro-.....	8010.....5
1,3-Dichlorobenzene	8020.....5
	8021... 0.2
	8120.....10
	8260.....5
	8270.....10
p-Dichlorobenzene;.....106-46-7..Benzene, 1,4-Dichloro-.....	8010.....2
1,4-Dichlorobenzene	8020.....5
	8021... 0.1
	8120.....15
	8260.....5
	8270.....10
3,3 <sup>1</sup> --Dichlorobenzidine.....91-94-1..{1,1 <sup>1</sup> -Biphenyl}-4,4 <sup>1</sup> -diamine,.....	8270.....20
3,3 <sup>1</sup> --dichloro-	
trans-1,4-Dichloro-2-.....110-57-6..2-Butene, 1,4-dichlor-(E).....	8260....100
butene	
Dichlorodifluoro-.....75-71-8..Methane, dichlorodifluoro.....	8021... 0.5
methane; CFC 12	8260.....5
1,1-Dichloroethane;.....75-34-3..Ethane, 1,1-dichloro.....	8010.....1
Ethyldidene chloride	8021... 0.5
	8260.....5
1,2-Dichloroethane;.....107-06-2..Ethane, 1,1-dichloro.....	8010... 0.5
Ethylene dichloride	8021... 0.3
	8260.....5
1,1-Dichloroethylene;.....75-35-4..Ethene, 1,1-dichloro.....	8010.....1
1,1-Dichloroethene;	8021... 0.5
Vinylidene chloride	8260.....5
cis-1,2-Dichloroethylene;.....156-59-2..Ethene, 1,2-dichloro-, (Z).....	8021....0.2

## 33CSR1

cis-1,2-Dichloroethane	8260.....5
trans-1,2-Dichloro-.....156-60-5..Ethene, 1,2-dichloro-, (E).....	8010.....1
ethylene; trans-1,2-	8021... 0.5
Dichloroethene	8260.....5
2,4-Dichlorophenol.....120-83-2..Phenol, 2,4-dichloro-.....	8040.....5
	8270.....10
2,6-Dichlorophenol.....87-65-0..Phenol, 2,6-dichloro-.....	8270.....10
1,2-Dichloropropane;.....78-87-5..Propane, 1,2-dichloro-.....	8010... 0.5
Propylene dichloride	8021... 0.05
	8260.....5
1,3-Dichloropropane;.....142-28-9..Propane, 1,3-dichloro-.....	8021... 0.3
Trimethylene dichloride	8260.....5
2,2-Dichloropropane;.....594-20-7..Propane, 2,2-dichloro-.....	8021....0.5
Isopropylidene chloride	8260.....15
1,1-Dichloropropene.....563-58-6..1-Propene, 1,1-dichloro-.....	8021... 0.2
	8260.....5
cis-1,3-Dichloropropene.....10061-01-5..1-Propene, 1,3-dichloro- (Z).....	8010.....20
	8260.....10
trans-1,3-Dichloro-.....10061-02-6..1-Propene, 1,3-dichloro- (E).....	8010.....5
propene	8260.....10
Dieldrin.....60-57-1..2,7:3,6-Dimethanonaphth.....	8080... 0.05
	{2,3-b}oxirene, 3,4,5,6,9,9
	-hexa, chloro-1a,2,2a,3,6,6a,7,
	7a-octa- hydro-, (1aa,2B,2aa,3B,
	6B,6aa,7B,7aa)
Diethyl phthalate.....84-66-2..1,2-Benzenedicarboxylic.....	8060.....5
	acid, diethyl ester.....8270.....10

## 33CSR1

0,0-Diethyl 0-2-.....297-97-2..Phosphorothioic acid,.....8141.....5	
pyrazinyl	0,0-diethyl 0-pyrazinyl ester 8270.....20
phosphorothioate; Thionazin	
Dimethoate.....60-51-5..Phosphorodithioic acid,.....8141.....3	
	0,0-diethyl,S-{2-(methylamino) ..8270.....20
	-2-oxoethyl} ester
p-(Dimethylamino)azobenzene.....60-11-7..Benzenamine,N,N-dimethyl-.....8270.....10	
	4-(phenylazo)
7,12-Dimethylbenz{a}anthracene-..57-97-6..Benz{a}anthracene, 7,12-dimethyl-..8270.....10	
3,3-Dimethylbenzidine-.....119-93-7..{1,1Biphenyl}-4,4-diamine,.....8270.....10	
	3,3-dimethyl-
2,4-Dimethylphenol;.....105-67-9..Phenol, 2,4-dimethyl.....8040.....5	
m-Xylenol	8270.....10
Dimethyl phthalate.....131-11-3..1,2-Benzenedicarboxylic acid,.....8060.....5	
	dimethyl ester 8270.....10
m-Dinitrobenzene.....99-65-0..Benzene, 1,3-dinitro-.....8270.....20	
4,6-Dinitro-o-cresol.....534-52-1..Phenol, 2-methyl-4,6-dinitro.....8040.....150	
4,6-Dinitro-2-methylphenol	8270.....50
2,4-Dinitrophenol;.....51-28-5..Phenol, 2,4-dinitro.....8040.....150	
	8270.....50
2,4-Dinitrotoluene.....121-14-2..Benzene, 1-methyl-2,4-dinitro-.....8090... 0.2	
	8270.....10
2,6-Dinitrotoluene.....606-20-2..Benzene, 2-methyl-1,3-dinitro-.....8090... 0.1	
	8270.....10
Dinoseb; DNBP; 2-sec-.....88-85-7..Phenol, 2-(1-methylpropyl)-.....8150.....1	
Butyl-4,6-dinitrophenol	4,6-dinitro- 8270.....20
Di-n-octyl phthalate.....117-84-0..1,2-Benzenedicarboxylic acid,.....8060.....30	

## 33CSR1

		dioctyl ester.....	8270.....	10
Diphenylamine.....	122-39-4..	Benezenamine, N-phenyl-.....	8270.....	10
Disulfoton.....	298-04-4..	Phosphorodithioic acid, 0,0-diethyl	8140.....	2
		S-{2-(ethylthio)ethyl}.ester	8141... 0.5	
			8270.....	10
Endosulfan I.....	959-98-8..	6,9-Methano-2,4,3-benzodiox-.....	8080... 0.1	
		athiepin, 6,7,8,9,10,10-hexa-	8270.....	20
		chloro 1,5,5a,6,9,9a-hexahydro,		
		3-oxide		
Endosulfan II.....	33213-65-9..	6,9-Methano-2,4,3-benzodiox-.....	8080.. 0.05	
		athiepin, 6,7,8,9,10,10-hexa-	8270.....	20
		chloro 1,5,5a,6,9,9a-hexa-hydro,		
		3-oxide, (3a,5aa,6B,9B,9aa) -		
Endosulfan sulfate.....	1031-07-8..	6,9-Methano-2,4,3-benzodiox-.....	8080... 0.5	
		athiepin, 6,7,8,9,10,10-hex-	8270.....	10
		achloro 1,5,5a,6,9,9a-hexa-		
		hydro, 3,3-dioxide.		
Endrin.....	72-20-8..	2,7:3,6-Dimethanonaphth{2,3-b}.....	8080... 0.1	
		oxirene, 3,4,5,6,9,9-hexachloro-	8270.....	20
		1a,2,2a,3,6,6a,7,7a- octahydro-,		
		(1aa,2B,2aB,3a,6a,6aB,7B,7aa) -		
Endrin aldehyde.....	7421-93-4..	1,2,4-Methenocyclopenta{cd}.....	8080... 0.2	
		pentalene-5- carboxaldehyde,	8270.....	10
		2,2a,3,3,4,7-hexachlorodec ahydro-,		
		(1a,2B,2aB,4B,4aB,5B,6aB,6bB,7R)		
Ethylbenzene.....	100-41-4..	Benzene, ethyl-.....	8020.....	2
			8221.. 0.05	
			8260.....	5

## 33CSR1

Ethyl methacrylate.....	97-63-2..	2-Propenoic acid, 2-methyl-,.....	8015.....	5
		ethyl ester	8260.....	10
			8270.....	10
Ethyl methanesulfonate.....	62-50-0..	Methanesulfonic acid, ethylester...	8270.....	20
Famphur.....	52-85-7..	Phosphorothioic acid, 0-.....	8270.....	20
		[4-{(dimethylamino)sulfonyl}		
		phenyl} 0,0-dimethyl ester		
Fluoranthene.....	206-44-0..	Fluoranthene.....	8100.....	200
			8270.....	10
Fluorene.....	86-73-7..	9-H-Fluorene.....	8100.....	200
			8270.....	10
Heptachlor.....	76-44-8..	4,7-Methano-1H-indene, 1,4,5,6,7,..	8080..	0.05
		8,8-heptachloro-3a,4,7,	8270.....	10
		7a-tetrahydro-		
Heptachlor epoxide.....	1024-57-3..	2,5-Methano-2H-indeno{1,2-b} .....	8080.....	1
		oxirene,2,3,4,5,6,7,7-hepta	8270...	.10
		chloro-1a,1b,5,5a,6,2,2,		
		hexahydro- (1aa,1bB,2a,5a,		
		5aB,6B,6aa)		
Hexachlorobenzene.....	118-74-1..	Benzene, hexachloro.....	8120...	0.5
			8270	10
Hexachlorobutadiene.....	87-68-3..	1,3-Butadiene, 1,1,2,3,4,.....	8021...	0.5
		4-hexachloro-	8120.....	5
			8260.....	10
			8270.....	10
Hexachlorocyclopentadiene.....	77-47-4..	1,3-Cyclopentadiene, 1,2,3, 4,5,..	8120.....	5
		5-hexachloro-	8270.....	10
Hexachloroethane.....	67-72-1..	Ethane, hexachloro-.....	8120...	0.5



## 33CSR1

		8260.....10
		8270.....10
Hexachloropropene.....1888-71-7..1-Propene,1,1,2,3,3,3-hexachloro-..		8270.....10
2-Hexanone; Methyl.....591-78-6..2-Hexanone.....		8260.....50
butyl ketone		
Indeno(1,2,3-cd )pyrene.....193-39-5..Indeno(1,2,3-cd)pyrene.....		8100.....200
		8270.....10
Isobutyl alcohol.....78-83-1..1-Propanol, 2-methyl-.....		8015.....50
		8240.....100
Isodrin.....465-73-6..1,4,5,8-Dimethanonaphthalene,.....		8270.....20
	1,2,3,4,10,10-hexachloro-	8260.....10
	1,4, 4a,5,8,8a hexahydro-	
	(1a,4a, 4aB,5B,8B,8aB) -	
Isophorone.....78-59-1..2-Cyclohexen-1-one,3,5,5 trimethyl		8090.....60
		8270.....10
Isosafrole.....120-58-1..1,3-Benzodioxole, 5-(1-pro-penyl) ..		8270.....10
Kepone.....143-50-0..1,3,4-Metheno-2H-cyclobuta{cd}.....		8270.....20
	pentalen-2-one,1,1a,3,3a,4,5,5,	
	5a,5b, 6-decachlorooctahydro-	
Lead.....(Total) ..Lead.....		6010.....400
		7420...1000
		7421.....10
Mercury.....(Total) ..Mercury.....		7470.....2
Methacrylonitrile.....126-98-7..2-Propenenitrile, 2-methyl-.....		8015.....5
		8260.....100
Methapyrilene.....91-80-5..1,2-Ethanediamine, N.N-dimethyl-...		8270.....100
	N-2-pridinyl-N1/2- thienylmethyl)	
Methoxychlor.....72-43 5..Benzene,1,1-(2,2,2,trichloro- .....		8080.....2

## 33CSR1

	ethylidene) bis{4-methoxy-	8270.....10
Methyl bromide;.....	74-83-9..Methane, bromo-.....	8010.....20
Bromomethane		8021.....10
Methyl chloride;.....	74-87-3..Methane, chloro-.....	8010.....1
Chloromethane		8021... 0.3
3-Methylcholan threne.....	56-49-5..Benz{j}aceanthrylene, 1,2.....	8270.....10
	dihydro- 3-methyl-	
Methyl ethyl.ketone; MEK;.....	78-93-3..2-Butanone.....	8015.....10
2-Butanone		8260....100
Methyl iodide;Iodomethane.....	74-88-4..Methane, iodo-.....	8010.....40
		8260.....10
Methyl methacrylate.....	80-62-6..2-Propenoic acid, 2-methyl.....	8015.....2
	ester	8260.....30
Methyl methanesulfonate.....	66-27-3..Methanesulfonic acid, methyl.....	8270.....10
	ester	
2-Methylnaphthalene.....	91-57-6..Naphthalene, 2-methyl-.....	8270.....10
Methyl parathion;.....	298-00-0..Phosphorothioic acid, 0,0-.....	8140... 0.5
Parathion methyl	dimethyl 0-(4-nitrophenyl)ester	8141.....1
		8270.....10
4-Methyl-2-pentanone;-.....	108-10-1..2-Pentanone, 4-methyl.....	8015.....5
Methyl isobutyl ketone		8260....100
Methylene bromide;.....	74-95-3..Methane, dibromo-.....	8010.....15
Dibromomethane		8021.....20
		8260.....10
Methylene chloride;.....	75-09-2..Methane, dichloro-.....	8010.....5
Dichloromethane		8021... 0.2
		8260.....10

## 33CSR1

Naphthalene.....	91-20-3..	Naphthalene.....	8021....	0.5
			8100....	200
			8260.....	5
			8270.....	10
1,4-Naphthoquinone.....	130-15-4..	1,4-Naphthalenedione.....	8270.....	10
1-Naphthylamine.....	134-32-7..	1-Naphthalenamine.....	8270.....	10
2-Naphthylamine.....	91-59-8..	2-Naphthalenamine.....	8270.....	10
Nickel.....	(Total) ..	Nickel.....	6010....	150
			7520....	400
o-Nitroaniline; 2-Nitroaniline...	88-74-4..	Benzenamine, 2-nitro-.....	8270.....	50
m-Nitroaniline; 3-Nitroaniline.....	99-09-2..	Benzenamine, 3-nitro-.....	8270.....	50
p-Nitroaniline;.....	100-01-6..	Benzenamine, 4-nitro-.....	8270.....	20
4-Nitroaniline				
Nitrobenzene.....	98-95-3..	Benzene, nitro-.....	8090.....	40
			8270.....	10
o-Nitrophenol; 2-Nitrophenol.....	88-75-5..	Phenol, 2-nitro-.....	8040.....	5
			8270.....	10
p-Nitrophenol; 4-Nitrophenol.....	100-02-7..	Phenol, 4-nitro-.....	8040.....	10
			8270.....	50
N-Nitrosodi-n- butylamine.....	924-16-3..	1-Butanamine, N-butyl-N-nitroso-...	8270.....	10
N-Nitrosodiethylamine.....	55-18-5..	Ethanamine, N-ethyl-N-nitroso.....	8270.....	20
N-Nitrosodimethylamine.....	62-75-9..	Methanamine, N-methyl-N-nitroso-...	8070.....	2
N-Nitrosodiphenylamine.....	86-30-6..	Benzenamine, N-nitroso-N-phenyl...	8070.....	5
N-Nitrosodipropylamine;.....	621-64-7..	1-Propanamine, N-nitroso-N-propyl..	8070.....	10
N-Nitroso-N-dipropylamine;				
Di-n-propylnitrosamine				
N-Nitrosomethylethylamine.....	10595-95-6..	Ethanamine, N-methyl-N-nitroso-....	8270.....	10
N-Nitrosopiperidine.....	100-75-4..	Piperidine, 1-nitroso-.....	8270.....	20

## 33CSRI

N-Nitrosopyrrolidine.....	930-55-2..	Pyrrolidine, 1-nitroso-.....	8270.....	40
5-Nitro-o-toluidine.....	99-55-8..	Benzenamine, 2-methyl-5-nitro-.....	8270.....	10
Parathion.....	56-38-2..	Phosphorothioic acid, 0,0-diethyl..	8141... 0.5	
		0-(4-nitrophenyl).ester.....	8270.....	10
Pentachlorobenzene.....	608-93-5..	Benzene, pentachloro-.....	8270.....	10
Pentachloronitrobenzene.....	82-68-8..	Benzene, pentachloronitro-.....	8270.....	20
Pentachlorophenol.....	87-86-5..	Phenol, pentachloro-.....	8040.....	5
			8270.....	50
Phenacetin.....	62-44-2..	Acetamide, N-(4-ethoxyphenyl).....	8270.....	20
Phenanthrene.....	85-01-8..	Phenanthrene.....	8100.....	200
			8270.....	10
Phenol.....	108-95-2..	Phenol.....	8040.....	1
p-Phenylenediamine.....	106-50-3..	1,4-Benzenediamine.....	8270.....	10
Phorate.....	298-02-2..	Phosphorodithioic acid, 0,0-.....	8140.....	2
		diethyl S-{ethylthio)methyl}	8141... 0.5	
		ester	8270.....	10
Polychlorinated.....	See Note 9..	1,1-Biphenyl, chloro derivatives...	8080.....	50
biphenyls; PCBs; Aroclors			8270.....	200
Pronamide.....	23950-58-5..	Benzamide, 3,5-dichloro-N-.....	8270.....	10
		(1,1-dimethyl-2-propynyl)-		
Propionitrile; Ethyl.....	107-12-0..	Propanenitrile.....	8015.....	60
cyanide			8260.....	150
Pyrene.....	129-00-0..	Pyrene.....	8100.....	200
			8270.....	10
Safrole.....	94-59-7..	1,3-Benzodioxole, 5-(2-propenyl)...	8270.....	10
Selenium.....	(Total) ..	Selenium.....	6010.....	750
			7740.....	20
			7741.....	20

## 33CSR1

Silver.....	(Total) ..	Silver.....	6010.....	70
			7760....	100
			7761.....	10
Silvex 2,4,5-TP.....	93-72-1..	Propanoic acid, 2-(2,4,5-	8150.....	2
		trichlorophenoxy) -		
Styrene.....	100-42-5..	Benzene, ethenyl-	8020.....	1
			8021...	0.1
			8260.....	10
Sulfide.....	18496-25-8..	Sulfide.....	9030...	4000
2,4,5-T; 2,4,5-.....	93-76-5..	Acetic acid, (2,4,5-	8150.....	2
Trichlorophen oxyacetic acid		trichlorophenoxy) -		
1,2,4,5-Tetrachlorobenzene.....	95-94-3..	Benzene, 1,2,4,5-tetrachloro-	8270.....	10
1,1,1,2-Tetrachloroethane.....	630-20-6..	Ethene, 1,1,1,2-tetrachloro-	8010.....	5
			8021..	0.05
			8260.....	5
1,1,2,2-Tetrachloroethane.....	79-34-5..	Ethane, 1,1,2,2-tetrachloro-	8010...	0.5
			8021...	0.1
			8260.....	5
Tetrachloroethylene;.....	127-18-4..	Ethane, tetrachloro-	8010...	0.5
Tetrachloroethene;			8021...	0.5
Perchloroethylene			8260.....	5
2,3,4,6-Tetrachlorophenol.....	58-90-2..	Phenol, 2,3,4,6-tetrachloro-	8270.....	10
Thallium.....	(Total) ..	Thallium.....	6010.....	400
			7840...	1000
			7841.....	10
Tin.....	(Total) ..	Tin.....	6010.....	40
Toluene.....	108-88-3..	Benzene, methyl-	8020.....	2
			8021...	0.1

## 33CSRI

		8260.....5
o-Toluidine.....	95-53-4..Benzenamine, 2-mehtyl-.....	8270.....10
Toxaphene.....	See Note 10..Toxaphene.....	8080.....2
1,2,4-Trichlorobenzene.....	120-82-1..Benzene, 1,2,4-trichloro-.....	8021... 0.3
		8120... 0.5
		8260.....10
		8270.....10
1,1,1-Trichloroethane;.....	71-55-6..Ethane, 1,1,1-trichloro-.....	8010... 0.3
Methylchloroform-		8021... 0.3
		8260.....5
1,1,2-Trichlorethane.....	79-00-5..Ethane, 1,1,2-trichloro-.....	8010... 0.2
		8260.....5
Trichloroethylene;.....	79-01-6..Ethene, trichloro-.....	8010.....1
Trichloroethene		8021... 0.2
		8260.....5
Trichlorofluoro-.....	75-69-4..Methane, trichlorofluoro-.....	8010.....10
methane; CFC-11		8021... 0.3
		8260.....5
2,4,5-Trichlorophenol.....	95-95-4..Phenol, 2,4,5-trichloro-.....	8270.....10
2,4,6-Trichlorophenol.....	88-06-2..Phenol, 2,4,6-trichloro-.....	8040.....5
		8270.....10
1,2,3-Trichloropropane.....	96-18-4..Propane, 1,2,3-trichloro-.....	8010.....10
		8021.....5
		8260.....15
0,0,0-Triethyl.....	126-68-1..Phosphorothioic acid,.....	8270.....10
phosphorothioate	0,0,0-triethylester	
sym-Trinitrobenzene-.....	99-35-4..Benzene, 1,3,5-trinitro-.....	8270.....10
Vanadium.....	(Total)..Vanadium.....	6010.....80

## 33CSR1

		7910...2000
		7911....40
Vinyl acetate.....	108-05-4..Acetic acid, ethenyl ester.....	8260.....50
Vinyl chloride;.....	75-01-4..Ethene, chloro-.....	8010.....2
Chloroethene		8021... 0.4
		8260.....10
Xylene(total).....	See Note 11..Benzene, dimethyl-.....	8020.....5
		8021... 0.2
		8260.....5
Zinc.....	(Total)..Zinc.....	6010.....20
		7950.....50
		7951... 0.5

## Notes:

1. The regulatory requirements pertain only to the list of substances; the right hand columns (methods and PQL are given for informational purposes only. See also footnotes 5 and 6.
2. Common names are widely used in governmental regulations, scientific publications, and commerce; synonyms exist for many chemicals.
3. Chemical Abstract Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.
4. CAS index are those used in the 9th Collective Index.



## 33CSR1

5. Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste," third edition, November 1986, as revised, December 1987. Analytical details can be found in SW-846 and in documentation on file at the Agency. Caution: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

6. Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQL values listed are generally stated to one significant figure. PQLs are based on 5 ml samples for volatile organics and 1 liter samples for semivolatile organics. Caution: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not part of the regulation.

7. This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2"-oxybis[2-chloro- (CAS RN 39638-32-9)].

8. Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6). PQL shown is for technical chlordane. PALS of specific isomers are about 20 ug/l by method 8270.

9. Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12676-74-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9),

### 33CSR1

Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

10. Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

11. Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7). PALS for method 8021 are 0.2 for o-xylene and 0.1 for m- or p-xylene. The PQL for m-xylene is 2.0 ug/L by method 8020 or 8260.

## 33CSR1

## APPENDIX III

MAXIMUM CONTAMINANT LEVELS (MCLs)  
(PROMULGATED UNDER THE SAFE DRINKING WATER ACT)

Chemical	CAS No.	MCL (mg/l)
Arsenic.....	7440-38-2.....	0.05
Barium.....	7440-39-3.....	1.0
Benzene.....	71-343-2.....	0.005
Cadmium.....	7440-43-9.....	0.01
Carbon tetrachloride.....	56-23-5.....	0.005
Chromium (hexavalent).....	7440-47-3.....	0.05
2,4-Dichlorophenoxy acetic acid.....	94-75-7.....	0.1
1,4-Dichlorobenzene.....	106-46-7.....	0.075
1,2-Dichloroethane.....	107-06-2.....	0.005
1,1-Dichloroethylene.....	75-35-4.....	0.007
Endrin.....	75-20-8.....	0.0002
Fluoride.....	7.....	4.0
Lindane.....	58-89-9.....	0.004
Lead.....	7439-92-1.....	0.05
Mercury.....	7439-97-6.....	0.002
Methoxychlor.....	72-43-5.....	0.1
Nitrate.....	.....	10.0
Selenium.....	7782-49-2.....	0.01
Silver.....	7440-22-4.....	0.05
Toxaphene.....	8001-35-2.....	0.005
1,1,1-Trichloroethane.....	71-55-6.....	0.2
Trichloroethylene.....	79-01-6.....	0.005
2,4,5-Trichlorophenoxy acetic acid.....	93-76-5.....	0.01
Vinyl chloride.....	75-01-4.....	0.002

**33CSR1****Appendix IV****Schedule of Solid Waste Facility Permit Application Fees**

Type of Solid Waste Facility	Application Fee
-----	-----
Class A Solid Waste Facility	\$7,500.00
Class B Solid Waste Facility	\$5,000.00
Class C Solid Waste Facility	\$3,000.00
Class D1 Solid Waste Facility	\$3,000.00
Class D Solid Waste Facility	\$250.00
Class E Solid Waste Facility	(Reserved)
Class F Solid Waste Facility	\$5,000.00
Non-Disposal Solid Waste Facility	\$2,500.00
Renewal of Permit	\$1,000.00
Solid Waste Facility Closure	\$2,500.00
Modification to Approved Solid Waste Facility	\$500.00
Background Investigation of Prospective Permittees	\$1,000.00*

\*Fee for each person listed in the disclosure statement required.

KEN HECHLER  
Secretary of State

MARY P. RATLIFF  
Deputy Secretary of State

JAN CASTO  
Deputy Secretary of State

CATHERINE FREROTTE  
Executive Assistant

Telephone: (304) 558-6000  
Corporations: (304) 558-8000  
FAX: (304) 558-0900



# STATE OF WEST VIRGINIA

## SECRETARY OF STATE

Building 1, Suite 157-K  
1900 Kanawha Blvd., East  
Charleston, WV 25305-0770

WILLIAM H. HARRINGTON  
Chief of Staff

JUDY COOPER  
Director, Administrative Law

PENNEY BARKER  
Supervisor, Corporations

(Plus all the volunteer  
help we can get)

TO: CARRIE CHAMBERS

AGENCY: DEP- WASTE MANAGEMENT

FROM: JUDY COOPER, DIRECTOR, ADMINISTRATIVE LAW DIVISION

DATE: June 12, 1997

THE ATTACHED RULE FILED BY YOUR AGENCY HAS BEEN ENTERED INTO OUR COMPUTER SYSTEM. PLEASE REVIEW, PROOF AND RETURN IT WITH ANY CORRECTIONS. IF THERE ARE NO CORRECTIONS, PLEASE SIGN THIS MEMO AND RETURN IT TO THIS OFFICE. YOU WILL BE SENT A FINAL VERSION OF THE RULE FOR YOUR RECORDS.

PLEASE RETURN EITHER THE CORRECTED RULE OR THIS FORM WITHIN TEN (10) WORKING DAYS OF THE DATE YOU RECEIVED THIS REQUEST. CALL IF YOU HAVE ANY QUESTIONS.

SERIES: 1 TITLE: 33 DEP- WASTE MANAGEMENT

\* THE ATTACHED RULE HAS BEEN REVIEWED AND IS CORRECT.

SIGNED: \_\_\_\_\_

TITLE OF PERSON SIGNING: \_\_\_\_\_

DATE: \_\_\_\_\_

\*\*\*\*\*

\* THE ATTACHED RULE HAS BEEN REVIEWED AND NEEDS CORRECTING. THE CORRECTIONS HAVE BEEN MARKED.

SIGNED: Larry S. Atha

TITLE OF PERSON SIGNING: ERS III

DATE: \_\_\_\_\_

NOTE: IF YOU ARE NOT THE PERSON WHO HANDLES THIS RULE, PLEASE FORWARD TO THE CORRECT PERSON.

OFFICE OF WEST VIRGINIA  
SECRETARY OF STATE

JUN 30 2 51 PM '97

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# **ATTACHMENT 2**

**WEST VIRGINIA  
SECRETARY OF STATE**

**KEN HECHLER**

**ADMINISTRATIVE LAW DIVISION**

Form #6

Do Not Mark in this Box

**FILED**

APR 18 3 41 PM '96

OFFICE OF WEST VIRGINIA  
SECRETARY OF STATE

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED  
BY THE WEST VIRGINIA LEGISLATURE.**

AGENCY: Division of Environmental Protection  
Office of Waste Management TITLE NUMBER: 47

AMENDMENT TO AN EXISTING RULE: YES X, NO \_\_\_\_\_

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 38

TITLE OF RULE BEING AMENDED: Solid Waste Management Regulations

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: \_\_\_\_\_

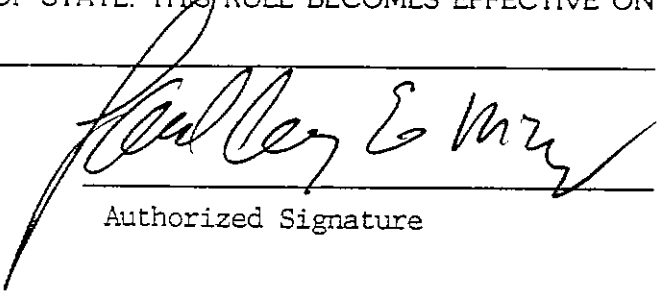
TITLE OF RULE BEING PROPOSED: \_\_\_\_\_

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) House Bill 4224

SECTION 64-3-1(1), PASSED ON March 9, 1996

THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON  
THE FOLLOWING DATE: June 2, 1996

  
Authorized Signature

27-80



**LEGISLATIVE HISTORY ABSTRACT  
SOLID WASTE MANAGEMENT RULE  
TITLE 47, SERIES 38**

April 16, 1996

Division of Environmental Protection  
Office of Waste Management  
Solid Waste Section  
Rulemaking Coordinator: Richard P. Cooke 558-6350

**FILING HISTORY**

June 23, 1995	Proposed Rule filed with Secretary of State.
July 24, 1995	Public Hearing was held on the Proposed Rule.
July 31, 1995	Agency-Approved Rule was filed with the Legislative Rule Making Committee.
December 12, 1995	Legislative Rule Making Committee approved the rule with modifications.
January 24, 1996	Modified Rule was filed with the Secretary of State.
March 9, 1996	HB 4224 was passed by the full Legislature. Section 64-3-1(l) of that Bill adopted the Rule.
April 1, 1996	Governor signed HB 4224.
April 17, 1996	Modified Rule was final filed with the Secretary of State.

TITLE 47  
LEGISLATIVE RULES  
BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION

SERIES 38  
SOLID WASTE MANAGEMENT RULE  
TABLE OF CONTENTS

§47-38-1. General.....	1
1.1. Scope and Purpose.....	1
1.2. Authority.....	2
1.3. Filing Date.....	2
1.4. Effective Date.....	2
1.5. Amendment of Former Rule.....	2
1.6. Lawful Disposal of Solid Waste Required.....	2
1.7. Incorporation by Reference.....	2
§47-38-2. Definitions.....	2
§47-38-3. Solid Waste Facility and Permitting Requirements.....	17
3.1. Prohibitions.....	17
3.2. Location Standards.....	17
3.3. Approvable Facilities.....	22
3.4. Pre-Siting Requirements for Commercial Solid Waste.....	23
3.5. Facility Permits.....	24
3.6. Permit Application Fees.....	25
3.7. Permit Application Requirements.....	26
3.8. General Geologic and Hydrologic Submission Requirements.....	31
3.9. Existing Land Use and Environmental Assessment.....	42
3.10. Proposed Landfill Design.....	45
3.11. Landfill Liners.....	48
3.12. Identification and Characterization of Potential Borrow Sources for Landfills.....	49
3.13. Bonding and Financial Assurance for Solid Waste Facilities.....	50
3.14. Background Investigation Disclosure Statement.....	64
3.15. Water Pollution Control Requirements.....	70
3.16. Specific Application and Permitting Requirements.....	70
3.17. Draft Permit.....	77

3.18. Permit Modification, Reissuance, Suspension, and Revocation.....	78
3.19. Transfer of Permit.....	81
3.20. Permit Renewal.....	81
3.21. Public Notice.....	82
3.22. Public Comments and Requests for Public Hearings..	84
3.23. Public Hearings.....	84
3.24. Reopening of the Public Comment Period.....	84
3.25. Public Participation File.....	85
3.26. Public Availability of Information.....	85
3.27. Issuance and Effective Date of Permit.....	85
3.28. Permit Review by the Director.....	86
3.29. Appeals.....	86
 §47-38-4. Landfill Performance Standards.....	86
4.1. Enforcement of Landfill Performance Standards.....	86
4.2. Solid Waste Assessment Fees.....	86
4.3. Landfill Manager Training and Certification.....	86
4.4. Operating Record.....	87
4.5. Minimum Design Criteria for Landfills.....	90
4.6. General Operational Requirements.....	113
4.7. Acceptable and Unacceptable Wastes.....	117
4.8. Leachate Management.....	119
4.9. Water Quality Standards.....	126
4.10. Landfill Gas Management.....	126
4.11. Groundwater Monitoring and Corrective Action Program.....	127
4.12. Reporting.....	146
4.13. Acceptance and Handling of Special Solid Wastes..	148
 §47-38-5. Other Solid Waste Facility Performance Standards.....	152
5.1. Requirements for Incinerators.....	152
5.2. Requirements for Transfer Stations.....	155
5.3. Requirements for Recycling Facilities.....	159
5.4. Requirements for Construction/Demolition "Class D" Solid Waste Facilities.....	159
5.5. Requirements for Class F Solid Waste Facilities...	162
5.6. Requirements for Uncommon or Miscellaneous Facilities.....	167
 §47-38-6. Closure and Post-Closure Care.....	167
6.1. Permanent Closure Criteria.....	180
6.2. Inactive Status.....	172
6.3. Post-Closure Care Requirements.....	173

6.4.	Final Post-Closure Inspection.....	175
6.5.	Bond Forfeiture.....	176
6.6.	Release of Bonds.....	177
6.7.	Preservation of Remedies.....	177
§47-38-7.	Open Dumps.....	177
7.1.	Prohibitions.....	177
7.2.	Protection of the Environment and the Public.....	178
7.3.	Schedules of Compliance for Open Dumps.....	179
7.4.	Enforcement.....	179
7.5.	Cooperation with the State Division of Highways...	179
7.6.	Cooperation with the State Tax and Revenue Division.....	180
7.7.	Cooperation with the State Health Division.....	180
7.8.	Cooperation with County and Regional Solid Waste Authorities.....	180
APPENDIX I CONSTITUENTS FOR PHASE I DETECTION MONITORING.....		181
APPENDIX II PHASE II ASSESSMENT MONITORING.....		184
APPENDIX III MAXIMUM CONTAMINANT LEVELS (MCLs).....		202
APPENDIX IV SCHEDULE OF SOLID WASTE FACILITY PERMIT APPLICATION FEES.....		203

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TITLE 47  
LEGISLATIVE RULESBUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTIONSERIES 38  
SOLID WASTE MANAGEMENT RULEOFFICE OF WEST VIRGINIA  
SECRETARY OF STATE

## §47-38-1. General.

1.1. Scope and Purpose. -- This legislative rule establishes requirements for the siting (including location standards), financial assurance, installation, establishment, construction, design, groundwater monitoring, modification, operation, permitting, closure and post-closure care of any solid waste facility that processes, recycles, composts, transfers or disposes of solid waste pursuant to W. Va. Code §22-15. This rule applies to any person who owns or operates a solid waste facility or who is responsible for the processing, composting, recycling, transfer or disposal of solid waste, except for those recycling facilities exempted from permitting requirements as authorized by W. Va. Code §20-11-12.

## 1.1.1. Applicability.

1.1.1.a. Permittees or applicants of existing solid waste landfills (SWLFs), or portions thereof, that stopped receiving waste before the effective date of this rule must close their SWLF in accordance with the terms and conditions of their solid waste permit, order, and/or the laws, rules and regulations in place on the effective date of this rule, unless permit requirements are otherwise required by the director.

1.1.1.b. Permittees of existing SWLFs, or portions thereof, that initiate, or continue receiving waste after the effective date of this rule must comply with the terms and conditions of their existing solid waste permit, order, and additionally the laws, rules and regulations in place on the effective date of this rule, unless said permit is modified by the director to include the requirements of this rule, or unless permit requirements are otherwise modified by the director.

1.1.1.c. Applicants for new SWLFs, and lateral expansions of existing SWLFs that are issued permits after the effective date of this rule must comply with the terms and conditions of that new solid waste permit, and/or the laws, rules and regulations, or order, in place on the effective date of this rule, unless otherwise required by the director.

1.1.1.d. The applicability requirements of this section do not apply to existing solid waste nondisposal solid waste facilities. These facilities must continue to comply with their existing permit and this rule, §§22-15, 22-12 and 22-11 as applicable, until such time as the permit is subject to renewal, modification or other similar permitting function. New "nondisposal" facility applicants must apply for permits as required by, and in compliance with, this rule.

1.2. Authority. -- W. Va. Code §§22-15-5, 22-15-10, 22-15-12, 22-15-13, and 22-15-14.

1.3. Filing Date. -- April 18, 1996

1.4. Effective Date. -- ~~April 30, 1996~~ June 2, 1996

1.5. Amendment of Former Rule. -- These legislative rule amends 47 CSR 38; the "Solid Waste Management Regulations" as filed and effective on May 1, 1990.

1.6. Lawful Disposal of Solid Waste Required. -- Solid waste must be disposed, processed, stored, transferred, or recycled only at permitted solid waste facilities as described in this rule. Solid waste landfill facilities failing to satisfy this rule are considered open dumps, as defined in section 2 of this rule, and will be subject to the actions and penalties outlined in Chapter 22, Article 15, Section 15.

1.7. Incorporation by Reference. -- Whenever federal or state statutes, rules or regulations are incorporated into this rule by reference, the reference is to the statute, rule or regulation in effect on the date stipulated by section 1.4 of this rule.

#### §47-38-2. Definitions.

Unless the context clearly requires a different meaning, all terms contained in this section are defined by their plain meaning. This section contains definitions for terms that appear throughout this rule.

2.1. "Access Road" means any road used for facility access, or for the hauling of solid waste to a solid waste facility, including internal or infrequently used access roads to all monitoring and treatment appurtenances or from a road that is under federal, state, or local authority.

2.2. "Act" means the "Solid Waste Management Act," as amended, W. Va. Code §22-15-1, et seq.

2.3. "Active Life" means the period of operation beginning with the initial receipt of solid waste and ending at completion of closure activities performed in accordance with section 6 of this rule.

2.4. "Active Portion" means that part of a solid waste facility that has received or is receiving wastes and/or has not been closed in accordance with section 6 of this rule.

2.5. "Airport" means any public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.

2.6. "Applicant" means the person applying for a commercial solid waste facility permit or similar renewal permit and any person related to such person by virtue of common ownership, common management or family relationships as the director specifies, including the following: Spouses, parents and children and siblings.

2.7. "Approved Solid Waste Facility" means a solid waste facility or practice which has a valid permit under the Act or which is otherwise authorized to conduct solid waste activities under the Act.

2.8. "Aquifer" means a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs.

2.9. "Areas Susceptible to Mass Movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the SWLF, or a portion thereof, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

2.10. "Asbestos" means the asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), erocidolite, amosite (cummingtonite-grunerite), anthophyllite, tremolite and actinolite.

2.11. "Background Investigation Disclosure Statement" means a required statement, on a form prescribed by the director, filed by any person or persons who are an applicant, permittee, operator, owner or other person of a solid waste facility, containing all required information for the conductance of a background investigation.

2.12. "Backhauling" means the practice of using the same container to transport solid waste and to transport any substance or material used as food by humans, animals raised for human consumption or reusable item which may be refilled with any substance or material used as food by humans.

2.13. "Bird Hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.

2.14. "Bond" means any performance bond or other form of financial assurance contemplated pursuant to W. Va. Code §22-15-12.

2.15. "Bulking Agent" means any material mixed and composted with sewage sludge.

2.16. "Bulky Goods" means large items of solid waste such as furniture, large automobile parts, water heaters, or other large, discarded appliances or metal products which are introduced to a solid waste landfill for disposal and whose large size precludes, or complicates their handling.

2.17. "Category I Nonfriable Material" means asbestos-containing materials such as packing, gaskets, asphalt roofing, and vinyl floor covering, containing one or more percent asbestos, which is not in poor condition and is not friable.

2.18. "Category II Nonfriable Material" means asbestos-containing materials such as transite siding, transite roofing, and brittle vinyl floor covering, containing one or more percent asbestos, which is not friable but



likely to become crumbled, pulverized, or reduced to powder during demolition or disposal.

2.19. "Chief" means the chief of the Office of Waste Management of the West Virginia Division of Environmental Protection or the chief's authorized representative.

2.20. "Class A Solid Waste Facility" means a commercial solid waste facility which handles an aggregate of between ten thousand (10,000) and thirty thousand (30,000) tons of solid waste per month. Class A facility includes two or more Class B solid waste landfills owned or operated by the same person in the same county, if the aggregate tons of solid waste handled per month by such landfills exceeds nine thousand nine hundred ninety-nine tons of solid waste per month.

2.21. "Class B Solid Waste Facility" means a commercial solid waste facility which receives or is expected to receive an average daily quantity of mixed solid waste equal to or exceeding one hundred (100) tons each working day, or serves or is expected to serve a population equal to or exceeding forty thousand (40,000) persons, but which does not receive solid waste exceeding an aggregate of ten thousand (10,000) tons per month. Class B facilities do not include construction/demolition facilities: Provided; That the definition of Class B facility may include such reasonable subdivisions or subclassifications as the director may establish by legislative rule proposed in accordance with the provisions of W. Va. Code §29A-1-1 et seq.

2.22. "Class C Solid Waste Facility" means a commercial solid waste facility which receives or is expected to receive an average daily quantity of mixed solid waste of less than one hundred (100) tons each working day, and serves or is expected to serve a population of less than forty thousand (40,000) persons. Class C solid waste facilities do not include construction/demolition facilities.

2.23. "Class D Solid Waste Facility" means any solid waste facility for the disposal of only construction/demolition waste and shall not include the legitimate beneficial reuse of clean waste concrete/masonry substances for the purpose of structural fill or roadbase material. Such facilities are further defined as follows:

2.23.1. "Class D-1 Solid Waste Facility" means a commercial or noncommercial facility other than a Class D solid waste facility permitted pursuant to section 3.16.5.d.

2.24. "Class E Solid Waste Facility" means any solid waste facility for the purpose of recycling at which neither land disposal nor biological, chemical, or thermal transformation of solid waste occurs.

2.25. "Class F Solid Waste Facility" means any industrial solid waste disposal facility.

2.26. "Clean Water Act" or "CWA" means the "Federal Water Pollution Control Act," as amended; 33 U.S.C. §1251 et seq.

2.27. "Coal Combustion By-Products" means the residuals, including fly

ash, bottom ash, bed ash, and boiler slag flue gas emission control waste produced by coal-fired or coal/gas-fired electrical or steam generating units. For non-electrical steam generating units burning a combination of solid waste and coal, a carbon monoxide (CO) level of less than or equal to one hundred parts per million (100 ppm) on a 24-hour average basis is required for the by-products to meet this definition. The carbon monoxide level must be calculated on a dry gas basis corrected to seven percent (7%) oxygen.

2.28. "Coal Combustion By-Product Facility" means a facility for the disposal of coal combustion by-products, including coal combustion by-product landfills and coal combustion by-product disposal surface impoundments, and does not include the legitimate beneficial use of coal combustion by-products.

2.29. "Commercial Recycler" means any person, corporation or business entity whose operation involves the mechanical separation of materials for the purpose of reselling or recycling at least seventy percent (70%) by weight of the materials coming into the commercial recycling facility.

2.30. "Commercial Solid Waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential wastes.

2.31. "Commercial Solid Waste Facility" means any solid waste facility which accepts solid waste generated by sources other than the owner or operator of the facility and does not include an approved solid waste facility owned and operated by a person for the sole purpose of disposing of solid wastes created by that person or such person and other persons on a cost-sharing or nonprofit basis and does not include land upon which reused or recycled materials are legitimately applied for structural fill, road base, mine reclamation, and similar applications.

2.32. "Composite Liner" means a system consisting of two components; the upper component must consist of a minimum 60-mil high density polyethylene (HDPE) and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec. The HDPE component must be installed in direct and uniform contact with the compacted soil component.

2.33. "Composting" means the aerobic, thermophilic decomposition of natural constituents of solid waste to produce a stable, humus-like material.

2.34. "Composting Facility" means any solid waste facility processing solid waste by composting, including sludge composting, organic waste or yard waste composting, but does not include a facility for composting solid waste that is located at the site where the waste was generated.

2.35. "Construction/Demolition Waste" means waste building materials, packaging, and grubbing waste, resulting from construction, remodeling, repair and demolition operations on houses, commercial and industrial buildings, pavements, including, but not limited to, wood, plaster, metals, asphaltic substances, bricks, blocks and concrete, other masonry materials, but does not include asbestos waste.

2.36. "Cover Material" means soil or other material, approved by the

director and used in a controlled manner to cover solid waste at solid waste disposal facilities.

2.37. "Director" means the director of the West Virginia Division of Environmental Protection or such other person to whom the director has delegated authority or duties pursuant to Article one, Chapter twenty-two of the Code of West Virginia, or the director's authorized representative. For the purpose of this rule, the term "director" also means the director of the West Virginia's solid waste permit program in the administration of sections 2002 and 4005 of RCRA.

2.38. "Disease Vectors" or "Vector" means any rodents, flies, mosquitoes, or other animals, including insects, capable of transmitting disease to humans.

2.39. "Displacement" means the relative movement of any two sides of a fault measured in any direction.

2.40. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent thereof may enter the environment or be emitted into the air, or discharged into any waters, including groundwaters.

2.41. "Division" means the West Virginia Division of Environmental Protection or its designee.

2.42. "Endangered or Threatened Species" means any endangered or threatened species, as defined in 50 CFR Part 17, of animal or plant and includes those species listed as endangered or threatened in 50 CFR Part 17.

2.43. "Energy Recovery Incinerator" means any solid waste facility at which solid wastes are incinerated with the intention of using the resulting energy for the generation of steam, electricity or any other use not specified herein.

2.44. "Existing SWLF" means any solid waste landfill that deposits solid waste after the effective date established in section 1.4 of this rule.

2.45. "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

2.46. "Floodplain" means the lowland and relatively flat areas adjoining waters of the state that may be inundated by the 100-year flood.

2.47. "Friable Asbestos" means any friable solid waste material containing more than one percent (1%) asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry.

2.48. "Gas Condensate" means the liquid generated as a result of gas recovery process(es) at the SWLF.

2.49. "Groundwater" means any water occurring in the zone of saturation

beneath the seasonal high water table, or any perched water zones, or water below the land surface in a zone of saturation.

2.50. "Holocene" means the most recent epoch of the Quaternary Period, extending from the end of the Pleistocene Epoch to the present.

2.51. "Household Waste" means any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

2.52. "Incineration Technologies" means any technology that uses controlled flame combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains little or no combustible materials, regardless of whether the purpose is processing, disposal, electric or steam generation or any other method by which solid waste is incinerated.

2.53. "Incinerator" means an enclosed device using controlled flame combustion to thermally break down solid waste, including refuse-derived fuel, to an ash residue that contains little or no combustible materials.

2.54. "Industrial Solid Waste" means any solid waste generated by manufacturing, or industrial processes that is not a hazardous waste regulated under subtitle "C" of RCRA. Such wastes may include, but are not limited to, waste resulting from factories, processing plants, refineries, fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; slaughter houses, mills, tanneries, electric power generating plants, mines, or mineral processing operations; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

2.55. "Industrial Solid Waste Landfill" means any solid waste disposal facility which is owned, operated, or leased by an industrial establishment for the land disposal of industrial solid waste created by that person or such person and other persons on a cost-sharing or nonprofit basis. The term "industrial solid waste landfill" does not include land application units, surface impoundments, or injection wells.

2.56. "Infectious Medical Waste" means infectious medical waste which is capable of producing an infectious disease. Medical waste is considered capable of producing an infectious disease if it has been, or is likely to have been, contaminated by an organism likely to be pathogenic to healthy humans, if such organism is not routinely and freely available in the community, and such organism has a significant probability of being present in sufficient quantities and with sufficient virulence to transmit disease. For the purposes of this rule, infectious medical waste includes the following materials:

2.56.1. "Animal Carcasses, Body Parts, Bedding and Related Waste" means contaminated animal carcasses, body parts, and the bedding of animals that are

known to have been exposed to infectious agents during research, the production of biologicals, or the testing of pharmaceuticals, or for any other reason.

2.56.2. "Blood and Blood Products" means liquid waste human blood and blood products in a free-flowing or unabsorbed state;

2.56.3. "Laboratory Wastes" means cultures and stocks of infectious agents and associated biologicals including, but not limited to, cultures from medical and pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, and discarded live and attenuated vaccines;

2.56.4. "Cultures and Stocks of Microorganisms and Biologicals" means discarded cultures, stocks, specimens, vaccines and associated items likely to have been contaminated by an infectious agent, discarded etiologic agents, and wastes from the production of biologicals and antibiotics likely to have been contaminated by an infectious agent.

2.56.5. "Pathological Wastes" means human pathological wastes, including tissues, organs, body parts, and containers of body fluids exclusive of those fixed in formaldehyde or another fixative.

2.56.6. "Sharps" means discarded articles that may cause punctures or cuts and that have been used in animal or human patient care or treatment, or in pharmacies or medical, research, or industrial laboratories, including, but not limited to, hypodermic needles, syringes with attached needles, scalpel blades, lancets and broken glassware.

2.56.7. "Isolation Wastes" means wastes generated from the care of a patient who has or is suspected of having any disease listed as Class IV in "Classification of Etiologic Agents on the Basis of Hazard" published by the United States Centers for Disease Control.

2.56.8. "Other Infectious Wastes" includes, but is not limited to any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill of any infectious medical waste, and waste contaminated by or mixed with infectious medical waste.

2.57. "Karst Region" means a type of topography which is formed over limestone or dolomite by dissolution of the formation and is characterized by sinkholes, caves, and similar features.

2.58. "Karst Terranes" means areas where karst topography, with its characteristic surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

2.59. "Land Application" means the application of liquid wastes onto a soil surface or the incorporation of solid waste into the soil surface for treatment and disposal.

2.60. "Landfill" means any solid waste facility or part of one at which

solid waste, or its residue after treatment, is intentionally used for disposal in or on land, at which solid waste will remain after closure. Such facility is situated, for the purposes of this rule, in the county where the majority of the spatial area of the facility is located. The term "landfill" does not include a land application unit, or injection well.

2.61. "Lateral Expansion" means a horizontal expansion of the waste boundaries of an existing SWLF.

2.62. "Leachate" means any liquid that has come into contact with, passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

2.63. "Lift" means the vertical thickness of compacted solid waste and the cover material immediately above it.

2.64. "Liner" means a continuous layer of natural or manmade materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of solid waste, any constituents of such waste, or leachate and which complies with this rule.

2.65. "Liquid Waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).

2.66. "Lithified Earth Material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include manmade materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

2.67. "Lower Explosive Limit" ("LEL") means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at twenty-five degrees centigrade (25 degrees C) and atmospheric pressure.

2.68. "Major Alluvial Aquifer" means an aquifer composed of alluvial materials located adjacent to West Virginia rivers, such as the Kanawha River, Little Kanawha River, and Ohio River as depicted on Groundwater Hydrology of the Minor Tributary Basins of those rivers.

2.69. "Major Domestic Use Aquifer" means an aquifer which serves as a domestic or public water supply serving at least an average of twenty-five (25) individuals per day for at least sixty (60) days per year, or which has at least fifteen (15) service connections.

2.70. "Major Modification" is a modification to an approved permit in which a major change to the permit is to occur as specified in section 3.18 of this rule.

2.71. "Materials Recovery Facility" means any solid waste facility at which source-separated materials or materials recovered through a mixed waste processing facility are manually or mechanically shredded or separated for



purposes of reuse and recycling, but does not include a composting facility.

2.72. "Maximum Horizontal Acceleration in Lithified Earth Material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90 percent or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

2.73. "Mixed Solid Waste" means solid waste from which materials sought to be reused or recycled have not been source-separated from general solid waste.

2.74. "Mixed Waste Processing Facility" means any solid waste facility at which materials are recovered from mixed solid waste through manual or mechanical means for purposes of reuse, recycling or composting.

2.75. "Municipal Solid Waste" means any household or commercial solid wastes as defined in this rule and any sludge from a waste treatment plant or a water supply treatment plant.

2.76. "Municipal Solid Waste Incineration" means the burning of any solid waste collected by any municipal or residential solid waste disposal company.

2.77. "New SWLF" means any solid waste landfill facility that has not received waste prior to the effective date established in section 1.4 of this rule.

2.78. "Noncommercial Solid Waste Facility" means any approved solid waste facility owned and operated by a person for the sole purpose of disposing of solid wastes created by that person or such person and other persons on a cost-sharing or nonprofit basis.

2.79. "Office" means the Office of Waste Management of the West Virginia Division of Environmental Protection or its designee.

2.80. "Open Burning" means the combustion of solid waste without:

2.80.1 Control of combustion air to maintain adequate temperature for efficient combustion;

2.80.2 Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and

2.80.3 Control of the emission of the combustion products.

2.81. "Open Dump" means any solid waste disposal which does not have a permit under W. Va. Code §22-15, and is not otherwise authorized by an order of the director, or is in violation of state law; or where solid waste is disposed in a manner that does not protect the environment.

2.82. "Operator" means the person(s) responsible for the overall operation of a solid waste facility or part thereof.

2.83. "Operating Hours" means the predetermined period of time specified by the facility permit or other such approval by the director during which



activities may be conducted at a solid waste facility. These activities are not limited to the actual process of disposal.

2.84. "Origin" means, for the purpose of section 4.12 of this rule, the actual point or location of waste generation, and not the point or location of transfer or the transfer station.

2.85. "Owner" means the person(s) who owns a solid waste facility or part thereof.

2.86. "Perennial Stream" means a stream or a portion of a stream that flows continuously or that under normal conditions supports aquatic life whose life history requires residence in flowing water for a continuous period of at least six (6) months.

2.88. "Permittee" means any person holding a permit or who is otherwise authorized to conduct solid waste activities under the Act.

2.89. "Persistent Violation" means any violation of the Act, this rule, any permit term or condition, or any order of this rule which is identified during two or more consecutive inspections performed by the director.

2.90. "Person," or "Persons," means:

2.90.1. Any industrial user, public or private corporation, institution, association, firm, or company organized or existing under the laws of this or any other state or country;

2.90.2. The State of West Virginia;

2.90.3. Any governmental agency, including federal facilities;

2.90.4. Any political subdivision of this State, including county commission, municipal corporation, industry, sanitary district, public service district, drainage district, soil conservation district, or watershed improvement district;

2.90.5. Any partnership, trust, or estate;

2.90.6. Any person or individual;

2.90.7. Any group of persons or individuals acting individually or as a group; or

2.90.8. Any legal entity whatever.

2.91. "Petroleum" means petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 lbs. per square inch absolute) and pipeline liquids. The term includes any refined petroleum products.

2.92. "Petroleum-Contaminated Soil" means any soil, dirt, rock or other earthen material which contains more than a de minimis (100 ppm of total petroleum hydrocarbons or less) amount of petroleum and which is not a

hazardous waste.

2.93. "Point Source" means any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel, floating craft, or system, or landfill leachate collection system from which pollutants are or may be discharged to the waters of the State.

2.94. "Poor Foundation Conditions" means those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of a SWLF.

2.95. "Post-Closure" means activities after the closure of a solid waste facility which are necessary to ensure compliance with the provisions of the Act and any rules promulgated thereunder including the application of final cover, grading, revegetation, groundwater monitoring, surface water monitoring, gas monitoring and control, leachate treatment, erosion control, and the abatement of any pollution or degradation to land, water, air, or other natural resources.

2.96. "Publicly-Owned Treatment Works" or "POTW" means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality as defined by the Clean Water Act. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

2.97. "Q.A./Q.C." means "quality assurance and quality control."

2.98. "Qualified Groundwater Scientist" is a scientist or engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certification(s), or completion of accredited university programs that enable that individual to make sound professional judgements regarding groundwater monitoring, contaminant fate and transport, and corrective action.

2.99. "Receiving Hours" means the period of time designated by the facility solid waste permit, or otherwise approved by the director within the operating hours that the solid waste facility accepts solid waste for disposal.

2.100. "Recycle" means the process by which recovered products are transformed into new products and includes the collection, separation, recovery and sale, or reuse of metals, glass, paper, and other materials.

2.101. "Recycling Facility" means any solid waste facility for the purpose of recycling at which neither land disposal nor biological, chemical, or thermal transformation of solid waste occurs: Provided, That mixed waste recovery facilities, sludge processing facilities and composting facilities are not considered recycling facilities nor considered to be reusing or recycling solid waste within the meaning of Chapter 22, Article 15, Chapter 22C, Article 4, and Chapter 20 Article 11, of the Code.

2.102. "Regulated Hazardous Waste" means a solid waste that is a hazardous waste, as defined in 40 CFR 261.3, that is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b) or was not generated by a conditionally exempt small quantity generator as defined in 40 CFR 261.5.

2.103. "Resource Recovery Facility" means any solid waste facility at which solid wastes are physically, mechanically, biologically, chemically, or thermally transformed for the purpose of separating, removing, or creating any material or energy for reuse or sale and at which land disposal of solid waste does not occur. Resource recovery facilities include incinerators equipped with integral or separate heat recovery systems, and other such solid waste facilities not herein specified, but does not include sewage sludge processing facilities.

2.104. "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

2.105. "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

2.106. "Salvage" means, but is not limited to, scrap copper, brass, rope, rags, paper, rubber, junked, dismantled, or wrecked machinery, machine or motor vehicles or any parts thereof; or iron, steel and other scrap ferrous or nonferrous materials.

2.107. "Salvage Yard" means any facility which is maintained, operated or used for the storing, buying, selling or processing of salvage materials or for the operation and maintenance of a motor vehicle graveyard, at which only mechanical processing of solid waste takes place and where no solid waste is disposed of on-site.

2.108. "Saturated Zone" means that part of the earth's crust in which all voids are filled with water.

2.109. "Scale" or "Scale House" means the area of the facility where waste initially enters the premises and the total and tare weights are determined and a receipt of deposit is generated.

2.110. "Schedule of Compliance" or "Compliance Schedule" means a list of activities approved or ordered by the director, which may include dates or specified times for completion of each or all activities which, when completed, will result in a site, facility, or practice which is environmentally sound and conforms to the requirements of the Act, this rule, or permit terms and conditions.

2.111. "Seismic Impact Zone" means an area with a ten percent (10%) or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull will exceed 0.10g in a 250-year period.

2.112. "Sewage" means water-carried human or animal wastes from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface waters as may be present.

2.113. "Sewage Sludge" means any solid, semi-solid or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage, scum or solids removed in primary, secondary or advanced wastewater treatment processes and a material derived from sewage sludge. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator.

2.114. "Sewage Sludge Processing Facility" it is a solid waste facility that processes sewage sludge for land application, incineration or disposal at an approved landfill. Such processes include, but are not limited to, composting, lime stabilization, thermophilic digestion and anaerobic digestion.

2.115. "Sludge" means any solid, semi-solid, or liquid waste, or residue, or precipitate, generated from, or separated from or created by a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar origin, exclusive of the treated effluent from a wastewater treatment plant.

2.116. "Solid Waste" means any garbage; paper; litter; refuse; cans; bottles; waste processed for the express purpose of incineration; sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility; and other discarded materials, including carcasses of any dead animal or any other offensive or unsightly matter; solid, liquid, semisolid, or contained liquid or gaseous material resulting from industrial, commercial, mining, agricultural operations, and community activities. The term "solid waste" does not include:

2.116.1. Solid or dissolved materials in domestic sewage;

2.116.2. Solid or dissolved materials in irrigation return flows;

2.116.3. Industrial discharges that are point sources and have permits under W. Va. Code §22-11; or subject to permit under 33 U.S.C. 1342;

2.116.4. Source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, (68 Stat 923) including any nuclear or by-product material considered by federal standards to be below regulatory concern;

2.116.5. A hazardous waste either identified or listed under W. Va. Code §22-18;

2.116.6. Refuse, slurry, overburden, or other wastes or material -- resulting either from coal-fired electric power or steam generation, or from the exploration, development, production, storage, and/or recovery of coal, oil and gas and/or other mineral resources -- that are placed or disposed of at a facility which is regulated under W. Va. Code §§22-2-1 et seq., 22-3-1 et seq., 22-4-1 et seq., 22-6-1 et seq., 22-7-1 et seq., 22-8-1 et seq., 22-9-1 et seq., 22-10-1 et seq., 22A-1-1 et seq., 22C-2-1 et seq., 22C-7-1 et seq., 22C-8-1 et seq., or 22C-9-1 et seq., so long as such placement or disposal is in conformance with a permit issued pursuant to such chapters; and

2.116.7. Materials which are recycled by being used or reused in an industrial process to make a product, as effective substitutes for commercial products, or are returned to the original process as substitutes for raw material feedstock.

2.117. "Solid Waste Disposal" means the practice of disposing of solid waste including placing, depositing, dumping, or throwing or causing to be placed, deposited, dumped, or thrown any solid waste.

2.118. "Solid Waste Disposal Shed" means the geographical area which the solid waste management board designates and files in the State Register pursuant to W. Va. Code §22C-3-9.

2.119. "Solid Waste Disposal Surface Impoundment" means a natural depression or manmade excavation or diked area that is designed for the disposal of solid waste containing free liquids and that is not an injection well, landfill, land application unit, or a surface impoundment as defined in section 2 of this rule.

2.120. "Solid Waste Facility" means any system, facility, land, contiguous land, improvements on the land, structures, or other appurtenances or methods used for processing, recycling, or disposing of solid waste including landfills, solid waste disposal surface impoundments, transfer stations, incinerators, recycling facilities, material's recovery facilities, mixed waste processing facilities, sewage sludge processing facilities, composting facilities and other such facilities not herein specified, but not including land upon which sewage sludge is applied in accordance with W. Va. Code §22-15-20(b). Such facility is deemed to be situated, for purposes of this rule, in the county where the majority of the spatial area of such facility is located: Provided, That a salvage yard, licensed and regulated pursuant to the terms of W. Va. Code §17-23-1 et seq., is not a solid waste facility.

2.121. "Solid Waste Landfill Facility (SWLF)" means a discrete area of land, or portion thereof, or an excavation that receives household waste, and that is not a land application facility, surface impoundment, injection well, or waste pile. A SWLF may also receive other types of RCRA subtitle D solid wastes, such as commercial solid wastes, nonhazardous sludge, small quantity generator wastes, and industrial solid wastes. Such a landfill may be a new SWLF, an existing SWLF, or a lateral expansion publicly or privately owned.

2.122. "Solid Waste Facility Operator" means any person or persons possessing or exercising operational, managerial or financial control over a commercial solid waste facility, whether or not such person holds a certificate of convenience and necessity or a permit for such facility.

2.123. "State Water Pollution Control Act" means W. Va. Code §22-11-1, et seq.

2.124. "Source-Separated Materials" means materials separated from general solid waste at the point of origin for the purpose of reuse and recycling but does not mean sewage sludge.

2.125. "Storage" or "Storage Area" means the interim storage of solid waste, at a permitted solid waste facility on a temporary basis. Any storage

that exceeds one hundred eighty (180) days, without the prior written approval of the director, in such a manner, constitutes illegal disposal of such solid waste (i.e., staging areas).

2.126. "Structural Components" means liners, leachate collection systems, final covers, run-on/run-off systems, and any other component used in the construction and operation of the SWLF that is necessary for protection of human health and the environment.

2.127. "Structural Fill" means an engineered/designed and controlled homogeneous fill with a projected spread in lifts not exceeding twelve (12) inches and compacted with proper power equipment. The material must be compacted in horizontal lifts to achieve the required design dry density and in-situ strength.

2.128. "Surface Impoundment" means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area that is designed to hold an accumulation of contaminated surface runoff or leachate or both.

2.129. "Transfer Station" means a combination of permanent structures, machinery, or devices at a place or facility where solid waste is taken from collection vehicles, often compacted, and prepared for shipment in other transportation units for movement to another solid waste management facility. Provided that, when solid waste is collected in a container including rollofs, green boxes or bins which are temporarily positioned (not more than five days) at a specific location for transport by a transportation unit, such shall not be considered a transfer station. Leachate must be properly managed under either described activity.

2.130. "Unstable Area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas can include poor foundation conditions, areas susceptible to mass movements and karst terranes.

2.131. "Uppermost Aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as, lower aquifers that are hydraulically interconnected with this aquifer within the facility's permit boundary.

2.132. "Uppermost Significant Aquifer" means the first, uppermost aquifer encountered which is laterally persistent under the entire site and is free flowing throughout the year. This defines the aquifer which flows all twelve (12) months of the year and can be encountered under any given point on the permitted site.

2.133. "USGS" means the "United States Geological Survey."

2.134. "Washout" means the carrying away of solid waste by waters of the base flood.

2.135. "Waste Management Facility Boundary" means a vertical surface located at the hydraulically downgradient limit of the facility. This



vertical surface extends down into the uppermost aquifer.

2.136. "Water Resources," "Water," or "Waters" means any and all water on or beneath the surface of the ground, whether percolating, standing, diffused or flowing, wholly or partially within this state, or bordering this state and within its jurisdiction, and includes, without limiting the generality of the foregoing, natural or artificial lakes, rivers, streams, creeks, branches, forks, brooks, ponds (except farm ponds, industrial settling basins and ponds and water treatment facilities), impounding reservoirs, springs, wells, watercourses, and natural wetlands.

2.137. "Wetlands" means those naturally occurring areas, as defined under 40 CFR 232.2(r) that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that, under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

2.138. "7Q10" means the seven (7) consecutive day drought flow with a ten (10) year return frequency.

2.139. "100-Year Flood" means a flood that has a 1-percent or greater chance of recurring in any given year or a flood of a magnitude equaled or exceeded once in 100 years on the average, over a significantly long period of time.

#### §47-38-3. Solid Waste Facility Permitting Requirements.

##### 3.1. Prohibitions.

No person may establish, construct, operate, maintain, or allow the use of property for a solid waste facility within an area where there is a reasonable probability that the facility will cause any of the following:

3.1.1. Natural Wetlands. A significant adverse impact upon natural wetlands, as defined in section 2 of this rule;

3.1.2. Endangered or Threatened Species. A significant adverse impact upon, or jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of a critical habitat of any animal or plant protected under the Endangered Species Act of 1973, and violates any requirement under the Marine Protection, Research and Sanctuaries Act of 1972 for the protection of a marine sanctuary, unless specifically approved by the United States Fish and Wildlife Service;

3.1.3. Surface Water. A significant adverse impact upon any surface water;

3.1.4. Groundwater. A significant adverse impact upon groundwater quality;

3.1.5. Compliance with other agency requirements.

3.1.5.a. A permittee must comply with any and all applicable federal



and state laws, rules, regulations or other requirements.

3.1.5.a.A. Permittees of SWLFs must not: Cause a discharge of pollutants into waters of the state, including natural wetlands, that violates any requirement of the Clean Water Act, as amended or applicable portions of Chapter 22, Article 11, of the Code of West Virginia, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402, of the Clean Water Act, or as reflected in Chapter 22, Article 11, of the Code of West Virginia, as amended.

3.1.5.a.B. Cause the discharge of a non-point source of pollution to waters of the state, including natural wetlands, that violates any requirements of an area-wide or state-wide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act, or as reflected in Chapter 22, Article 11, of the Code of West Virginia, as amended.

3.1.5.a.C. Cause the discharge of a point source of pollution to waters of the State, in violation of surface water quality standards found in §22-11 or any rules or regulations promulgated thereunder; or

3.1.5.a.D. A violation of the Groundwater Protection Act, W. Va. Code 22-12-1 et seq.

3.1.6. Explosive Gases. Cause the generation by any facility and subsequent migration and concentration of methane or other explosive gases in any facility structure, excluding the leachate collection system or gas control or recovery system components, or in the soils or air at or beyond the facility property boundary in excess of twenty-five percent (25%) of the lower explosive limit for such gases at any time; or

3.1.7. Air Pollution. The emission of any air contaminant exceeding the limitations for those substances as set by the West Virginia Division of Environmental Protection, Office of Air Quality.

### 3.2. Location Standards.

Unless otherwise approved by the director in writing, a person must not establish, construct, operate, maintain, or allow the use of property for a landfill in the following areas:

(Note: All distance measurements prescribed in section 3.2. of this rule refer to distances as measured from the edge of the waste management unit boundary of a facility.)

#### 3.2.1. Location Standards for Surface Water.

No SWLF may be located within three hundred (300) feet of any surface water (facility drainage or sedimentation control structures are exempt from this distance calculation);

#### 3.2.2. Location Standards for Natural Wetlands.

No SWLF may be located within three hundred (300) feet of any natural wetlands, unless the permittee can make the following demonstrations to the

director (facility drainage or sedimentation control structures are exempt from this distance calculation):

3.2.2.a. Where applicable under section 404 of the Clean Water Act or applicable wetland laws under Chapter 22, Article 11, or any rules promulgated thereunder, the presumption that a practicable alternative to the proposed landfill is available which does not involve natural wetlands is clearly rebutted:

3.2.2.b. The construction and operation of the SWLF must not:

3.2.2.b.A. Cause or contribute to violations of any applicable state water quality standard;

3.2.2.b.B. Violate any applicable Chapter 22, Article 11, and/or other toxic effluent standard or prohibition under section 307 of the Clean Water Act or as reflected in Chapter 22, Article 11, of the Code of West Virginia, as amended;

3.2.2.b.C. Jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; and

3.2.2.b.D. Violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

3.2.2.c. The SWLF must not cause or contribute to significant degradation of natural wetlands, and the permittee must also demonstrate the integrity of the SWLF and its ability to protect ecological resources by addressing the following factors:

3.2.2.c.A. Erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the SWLF;

3.2.2.c.B. Erosion, stability, and migration potential of dredged and fill materials used to support the SWLF;

3.2.2.c.C. The volume and chemical nature of the waste managed in the SWLF;

3.2.2.c.D. Impacts upon fish, wildlife, and other aquatic resources and their habitat from any release of the solid waste, or the leachate thereof;

3.2.2.c.E. The potential effects of catastrophic releases of waste or the leachate thereof, to the natural wetlands and the resulting impacts on the environment; and

3.2.2.c.F. Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

3.2.2.c.G. To the extent required under section 404 of the Clean Water Act or applicable state natural wetlands laws as reflected in Chapter

22, Article 11, of the Code of West Virginia, as amended, steps must have been taken to attempt to achieve no net loss of natural wetlands (as defined by acreage and function) by first avoiding impacts to natural wetlands to the maximum extent practicable as required by section 3.2.2.a of this rule, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded natural wetlands or creation of manmade natural wetlands).

### 3.2.3. Perennial Stream Location Standards;

No SWLF may be located within the watercourse of a perennial stream;

### 3.2.4. Location Standards for Floodplains.

3.2.4.a. Permittees of new SWLFs, existing SWLFs and lateral expansions located in a 100-year floodplains must demonstrate that the SWLF does not, and will not:

3.2.4.a.A. Restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or

3.2.4.a.B. Result in a washout of solid waste so as to pose a hazard to human health and/or the environment.

### 3.2.5. Location Standards for Highways and Public Parks.

New SWLFs and lateral expansions must not be located within one thousand (1,000) feet of the nearest edge of the right-of-way of any state highway, interstate, federal aid primary or federal aid secondary, or county highway, or the boundary of any public park unless the facility is screened by natural objects, plantings, fences, or other appropriate means so that it is not readily visible from the highway or park;

### 3.2.6. Location Standards for Fault Areas.

3.2.6.a. New SWLFs and lateral expansions must not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time (i.e., during the last eleven thousand years);

3.2.6.b. Unless the permittee demonstrates to the director in a permit application that an alternative setback distance of less than 200 feet (60 meters) will prevent damage to the structural integrity of the SWLF and will be protective of human health and the environment.

### 3.2.7. Location Standards for Airport Safety.

3.2.7.a. Permittees of new SWLFs, existing SWLFs, and lateral expansions must not be located within ten thousand (10,000) feet (3,048 meters) of any portion of the airport runway used or planned to be used by turbojet aircraft or within five thousand (5,000) feet (1,524 meters) of any portion of the airport runway used or planned to be used only by piston-type aircraft or within other areas where a substantial bird hazard to aircraft would be created; unless such applicants demonstrate that the SWLFs are

designed and operated so that the SWLF does not and will not pose a bird hazard to aircraft.

3.2.7.b. Permittees proposing to site new SWLFs and lateral expansions located within a five-mile radius of any portion of an airport runway used by turbojet or piston-type aircraft must provide written notification to both the affected airport and the Federal Aviation Administration (FAA), and provide copies of the same to the director.

### 3.2.8. Location Standards for Dwellings.

3.2.8.a. Permittees of new SWLFs, and lateral expansions must not be located within five hundred (500) feet of a dwelling that is, or will be occupied, at the time of initial facility siting, unless written permission is received from the owner of the dwelling;

### 3.2.9. Location Standards for Wells.

3.2.9.a. Permittees of new SWLFs, existing SWLFs, and lateral expansions cannot be located within twelve hundred (1,200) feet of any public or private water supply well in existence at the time of initial facility siting;

### 3.2.10. Location Standards for Unstable Areas.

3.2.10.a. Permittees of new SWLFs, existing SWLFs, and lateral expansions cannot be located within one thousand (1,000) feet of any area considered by the director to be unstable due to extreme geologic and hydrologic conditions (e.g., immaturely to maturely developed karst terrain, solution cavities), unless the permittee can demonstrate that engineering measures have been incorporated into the SWLF's design to ensure that the integrity of the structural components of the SWLF will not be disrupted, and

3.2.10.b. The Permittee must consider the following factors, at a minimum, when determining whether an area is unstable:

3.2.10.b.A. On-site or local soil conditions that may result in significant differential settling;

3.2.10.b.B. On-site or local geologic or geomorphologic features; and

3.2.10.b.C. On-site or local human-made features or events (both surface and subsurface).

### 3.2.11. Location Standards for Underground Mines.

3.2.11.a. Permittees of new SWLFs, and lateral expansions cannot be located above underground mine workings or within the critical angle of draw of such workings, unless otherwise approved by the director in writing;

### 3.2.12. Location Standards for Surface Mines.

Permittees of new SWLFs, and lateral expansions cannot be located within

previously surface mined areas, unless otherwise approved by the director in writing.

### 3.2.13. Location Standards for Seismic Impact Zones.

New SWLFs and lateral expansions must not be located in seismic impact zones, unless the permittee demonstrates to the Director that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

### 3.2.14. Location Standards for Air Criteria.

3.2.14.a. All permittees must ensure that violations of the applicable requirements developed under a State Implementation Plan (SIP) promulgated pursuant to section 110 of the Clean Air Act, as amended or as reflected in the rules promulgated by the Office of Air Quality, do not occur.

3.2.14.b. Open burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, landclearing debris, diseased trees, or debris from emergency cleanup operations, except as approved by the Office of Air Quality, is prohibited at all SWLFs.

### 3.2.15. Recordkeeping.

The permittee must retain a copy of all such demonstrations for location standards that have previously received the written approval of the director pursuant to this section in the facility operating record, as required by section 4.4 of this rule.

## 3.3. Approvable Facilities.

### 3.3.1. Approvable Solid Waste Facilities.

Solid waste facilities for which approval may be granted include the following, or any combination thereof:

- 3.3.1.a. Class A Solid Waste Facility;
- 3.3.1.b. Class B Solid Waste Facility;
- 3.3.1.c. Class C Solid Waste Facility;
- 3.3.1.d. Class D Solid Waste Facility;
- 3.3.1.e. Class E Solid Waste Facility;
- 3.3.1.f. Class F Solid Waste Facility;
- 3.3.1.g. Sewage Sludge Processing Facility;
- 3.3.1.h. Yard Waste Composting Facility;
- 3.3.1.i. Mixed Waste Processing Facility; and/or

3.3.1.j. Other solid waste facilities approved in writing by the director.

#### 3.4. Pre-Siting Requirements for Commercial Solid Waste Facilities.

Except those recycling facilities specifically exempted by section 20-11-12 of the Code, any person wishing to apply for a permit under Article 22-15 must comply with the following:

3.4.1. Any person investigating an area for the purpose of siting a commercial solid waste facility where no current solid waste facility exists, in order to determine a feasible, approximate location, and in order to obtain a permit to construct and operate a commercial solid waste facility in this state, a person must have complied with the pre-siting requirements of section 22-15-13 of the Code of West Virginia, including, but not limited to the following:

3.4.1.a. Publish a Class II legal advertisement in a qualified newspaper, as defined in W. Va. Code §59-3-1, serving the county or counties in which the proposed facility is to be located. This legal advertisement must include the nature of the proposed activity, and:

3.4.1.a.A. A description of the location or locations at which the proposed facility may be sited;

3.4.1.a.B. A statement of the anticipated size of the proposed facility, in acres; and

3.4.1.a.C. An estimate of the volume, type, and origin of solid waste to be handled at the proposed facility.

3.4.1.b. File a pre-siting notice with the director within five (5) days of the publication of the legal advertisement required under section 3.4.1.a of this rule. The pre-siting notice must be made in writing on forms obtained from the director, which must be signed and verified by the applicant, and must include:

3.4.1.b.A. A certification of publication of the legal advertisement required under section 3.4.1.a of this rule from a qualified newspaper, as defined in W. Va. Code §59-3-1 in which such advertisement was published;

3.4.1.b.B. A description of each location at which the proposed facility or facilities may be sited;

3.4.1.b.C. A United States Geological Survey (USGS) topographic map or portion thereof, and a map showing the location and anticipated property, site, and other boundaries of each site being considered for the proposed facility;

3.4.1.b.D. An estimate of the volume, type, and origin of solid waste to be handled at the proposed facility;

3.4.1.b.E. The period of time over which the investigative review

of the site will be undertaken;

3.4.1.b.F. Other information required by the director; and

3.4.1.c. Provide a copy of the pre-siting notice to the appropriate county or regional solid waste authority, county commission and/or other entities established pursuant to Chapter 22C, Article 4, Section 1 et sec. of the Code of West Virginia, as amended, according to the county or region in which the proposed facility is to be located, as required within five (5) days of the publication of the legal advertisement required under section 3.4.1.a of this rule.

3.4.2. The director, must hold a public hearing on the pre-siting notice in the area potentially affected.

3.4.2.a. The public hearing on the contents of the pre-siting notice must be conducted in accordance with the provisions of section 3.23 of this rule.

3.4.2.b. The director may substitute the public hearing held by the county or regional solid waste authority during the county appraisal or county siting process for the hearing contemplated by section 3.4.2 of this rule.

3.4.3. Based on comments received at the public hearing or received in writing within ten (10) days following the public hearing, or upon recommendations received from the county, regional solid waste authorities within ninety (90) days after their receipt of the pre-siting notice, the director may require the person who submitted that notice to furnish additional information on the siting of the proposed facility. Such additional information may include, but not be limited to, the following:

3.4.3.a. Impacts upon transportation facilities;

3.4.3.b. Impacts upon public water supplies;

3.4.3.c. Impact upon land use patterns;

3.4.3.d. Impacts upon agricultural, commercial and residential real estate values;

3.4.3.e. Impacts upon wildlife;

3.4.3.f. Impacts upon endangered or threatened species of animals or plants;

3.4.3.g. Impacts upon aesthetics;

3.4.3.h. Impacts upon socioeconomic conditions;

3.4.3.i. Impacts upon water resources; and

3.4.3.j. Other impacts as determined by the director.

3.5. Facility Permits.



### 3.5.1. Permit Required.

A permit must be obtained from the director prior to the installation, establishment, construction, modification, operation, or closure of any solid waste facility.

### 3.5.2. Single Permit.

Permits issued pursuant to this rule must meet the requirements of W. Va. Code §§22-15 and 22-11, and all associated rules as applicable so that only one permit for any solid waste facility will be issued by the director. The §22-11 portion of that single permit must also meet the requirements of the "Groundwater Protection Act" promulgated under §22-12-1 et seq., and any rules promulgated thereunder, as amended.

### 3.5.3. Term of Permit.

All permits issued pursuant to W. Va. Code §22-15 and this rule must have a fixed term not to exceed five (5) years from the date of issuance. The director may administratively extend any permit expiration date for a period of up to one (1) year.

### 3.5.4. Existing Permits.

Any person who, on or after the effective date of this rule, holds a valid Division permit, or modifies or renews such permit to conduct a solid waste activity must, upon notification by the director in writing, submit a request to the director for a minor modification of that permit, in accordance with the provisions of section 3.18 of this rule, so that the applicable provisions of this rule can be incorporated into the terms and conditions of the existing permit. The director may only require a minor modification of the facility permit if the statute "Solid Waste Management Act," this rule, or the counterpart federal regulation is modified or amended. The permit modification request must be submitted within ninety (90) days of the date of receipt of the notification of the director that they are required to comply with all requirements of §22-15-1 et seq., and this rule, as applicable.

### 3.5.5. Application Completeness.

A complete permit application, including the background investigation disclosure statement, must consist of all applicable information as required for final permit approval by this rule that renders the application for a permit, renewal, modification, transfer or other permitting function to be both administratively and technically complete.

### 3.6. Permit Application Fees.

3.6.1. Each application for a solid waste facility permit, renewal, modification, transfer or other permitting functions must be accompanied by a nonrefundable application fee in accordance with the schedule of fees in Appendix IV to this rule, as amended.

3.6.2. A fee equal to ten percent (10%) of the application fee listed in Appendix IV to this rule must accompany an application for any renewal,

modification, transfer or other permitting functions refiled or that requires additional information due to substantial administrative or technical incompleteness.

### 3.7. Permit Application Requirements.

A permit must be obtained from the director prior to the installation, establishment, construction, modification, operation, or closure of any solid waste facility. Unless otherwise specified in this rule or on application forms prescribed by the director, all applications for a solid waste facility permit must include the following:

#### 3.7.1. Forms and Number of Copies.

The application must be made on the forms prescribed by, and obtained from the director. Four (4) copies of the application, including all supporting documents, must be submitted to the director; a fifth copy must be submitted to the applicable county, or regional solid waste authority for the area in which the proposed facility is, or will be located.

#### 3.7.2. Property Rights.

The application must provide a copy and a narrative description of the legal documents upon which the applicant's legal right to enter and conduct solid waste operations is based within the solid waste facility proposed permit area and whether that right is the subject of pending or current court litigation.

#### 3.7.3. Certification.

All application documents related to engineering and design plans and specifications must be compiled, signed, and sealed by a professional engineer who is registered to practice in West Virginia.

#### 3.7.4. Cover Letter.

The application must include a cover letter detailing the desired division action and/or response.

#### 3.7.5. Table of Contents.

The application must include a table of contents listing all sections, visuals and attachments of the submittal.

#### 3.7.6. Visuals.

The application must include appropriate maps, figures, photographs, and tables to clarify information or conclusions. The visuals must be legible. All maps, plan sheets, drawings, isometrics, cross-sections, aerial photographs and other attachments must:

3.7.6.a. Be no smaller than eight and one-half inches by eleven inches (8-1/2" x 11") and, if larger, must be folded to eight and one-half inches by eleven inches (8-1/2" x 11");

3.7.6.b. Be of appropriate scale to show all required details in sufficient clarity;

3.7.6.c. Be numbered, referenced in the table of contents and narrative, titled, have a legend of all symbols used, and specify drafting or origination dates;

3.7.6.d. Use uniform horizontal and vertical scales;

3.7.6.e. Contain a north arrow;

3.7.6.f. Use USGS datum as a basis for all elevations;

3.7.6.g. Contain a survey grid with a maximum dimension of two hundred (200) feet square based on monuments established in the field which is referenced to state plane coordinates;

3.7.6.h. Show original topography and the grid system on plan sheets showing construction, operation, or closure topography; and

3.7.6.i. Show survey grid location and reference major plan sheets on all cross-sections. A reduced diagram of a cross-section location plan view map must be included on the sheets with the cross-section.

### 3.7.7. Quality Assurance and Quality Control Plans.

The application must include quality assurance and quality control (Q.A./Q.C.) plans to be implemented to assure conformity of the solid waste facility construction, environmental monitoring, monitoring well development, and provisions for monitoring within applicable standards.

3.7.7.a. The Q.A./Q.C. plans must include a delineation of the quality assurance and quality control management organization, including the chain of command of the Q.A./Q.C. inspectors and contractors;

3.7.7.b. The Q.A./Q.C. plans must include a description of the required level of experience and training for the contractor, the contractor's crew, and Q.A./Q.C. inspectors for every major phase of construction in sufficient detail to demonstrate that the installation methods and procedures required in this rule will be properly implemented; and

3.7.7.c. The Q.A./Q.C. plans must include a description of the quality assurance and quality control testing procedures for every major phase of construction. At a minimum, these Q.A./Q.C. procedures must include:

3.7.7.c.A. The frequency of field inspections, field testing, and frequency of sampling for laboratory testing;

3.7.7.c.B. The sampling and field testing procedures and any associated equipment to be utilized;

3.7.7.c.C. The calibration of field testing equipment;

3.7.7.c.D. The frequency of performance audits;

3.7.7.c.E. The sampling size;

3.7.7.c.F. The soils or geotechnical laboratory to be used;

3.7.7.c.G. The laboratory procedures to be utilized;

3.7.7.c.H. The calibration of laboratory equipment;

3.7.7.c.I. The laboratory's Q.A./Q.C. procedures;

3.7.7.c.J. The limits for test failure; and

3.7.7.c.K. A description of the corrective procedures to be used upon test failure;

3.7.7.d. The Q.A./Q.C. plans must include a description of the quality assurance and quality control sampling and analysis procedures. At a minimum, these Q.A./Q.C. procedures must encompass the sampling procedures and analyses of groundwater, surface water, soil, leachate, and gas required under this rule.

### 3.7.8. Technical Procedures.

All technical procedures used to investigate a solid waste facility must be the current standard procedures as specified by the American Society for Testing Materials or by the United States Geological Survey or other equivalent, appropriate methods approved by the director.

3.7.8.a. All technical data submitted in the application must be accompanied by the names of person(s) and/or organization(s) that collected and/or analyzed the data, the dates of the collection, dates of analyses, an analysis of the data, a description of the methodology used to collect and analyze the data, and the chain of custody of any sample taken for analyses.

### 3.7.9. Endangered Species and Historic Sites.

The application must include a letter from the Division of Natural Resources' Section of Wildlife Resources addressing the presence of any endangered or threatened species of animals or plants in the vicinity of the proposed facility. The application must also include a letter from the West Virginia Division of Culture and History addressing the presence of any historical, scientific, or archaeological areas in the vicinity of the proposed facility.

### 3.7.10. Bonding and Financial Assurance.

Sufficient bond or other type of financial assurance must be submitted to the division in compliance with the provisions of section 3.13 of this rule.

3.7.10.a. The permittee must maintain copies of any required closure, post-closure and corrective action cost estimates in the operating record. A copy of the estimate, or the estimate as amended, must be approved by the director prior to the placement of the estimate in the operating record.

### 3.7.11. Background Investigation Disclosure Statement.

The background investigation disclosure statement for a solid waste facility permit must include the name of the applicant or any officer; director, or manager thereof; shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise; or other person conducting or managing the affairs of the applicant or the proposed facility and must be submitted to the director in compliance with section 3.14 of this rule.

### 3.7.12. Facility Expansion.

In an application for an expansion of an existing facility, the effectiveness of the existing design and operation must be discussed. An evaluation of relevant monitoring data and a discussion of all plan modifications and remedial actions must be included in the application. Any significant adverse impacts to the waters of the State or to any endangered or threatened species of animal or plant that could result from the expansion must also be noted and discussed.

### 3.7.13. Waste Reduction and Recovery Information.

The application must include a discussion of the alternatives to the facility, as well as a description of any waste reduction incentives and recycling services to be instituted or provided with the proposed facility as contained in section 3.7.13 of this rule.

#### 3.7.13.a. Waste Types, Origins, and Quantities.

The application must include a brief description of the types, origins, and quantities of household, commercial, industrial, construction/demolition, and other wastes anticipated to be accepted at the existing or proposed facility and a calculation of waste quantities by composition based on state-estimated figures or other data if readily available.

#### 3.7.13.b. Description of Technologies.

The application must include a brief description of the technologies and methodologies of waste reduction, reuse, recycling, composting and energy recovery as applicable to the wastes anticipated to be accepted at the proposed facility.

#### 3.7.13.c. Ongoing Program.

The application must include a brief description of any known waste reduction or recovery programs in the area to be served by the proposed facility that handle the types of waste anticipated to be accepted at the existing or proposed facility, including a description of their potential for expansion.

#### 3.7.13.d. Recommendations.

The application must include a brief description of any recommendations for waste reduction and recovery in approved area-wide solid waste management plans for all counties in the area to be served by the proposed facility.

#### 3.7.13.e. Current Studies.

The application must include a brief description of any waste reduction or recovery studies being conducted for wastes anticipated to be accepted at the proposed facility.

#### 3.7.13.f. Available Recovery Markets.

The application must include a description of the nearest available markets for recoverable material from the waste anticipated to be accepted at the proposed facility including:

3.7.13.f.A. Market name and address;

3.7.13.f.B. Market requirements for minimum quantities and preparation for deliverable material; and

3.7.13.f.C. Prices paid for materials, including both current prices and ranges for the past three (3) years, if available.

#### 3.7.13.g. Potential Energy Markets.

The application must include a brief description of energy users within the service area capable of using at least twenty-five percent (25%) of the energy available in the waste stream anticipated at the proposed facility or for the energy available from a minimum of twenty-five (25) tons of waste per day, whichever is greater. At a minimum, consideration must be given to both electrical generation and to steam production.

#### 3.7.13.h. Future Effects.

The application must include a brief description of any efforts to be implemented to either assist in the expansion of existing waste reduction and recovery programs or to develop new programs for waste reduction and recovery.

#### 3.7.14. Geotechnical Information.

The application must include an analysis of the geologic, hydrogeologic, topographic, and hydrologic features of the facility site that may be favorable or unfavorable for facility development in compliance with the requirements of section 3.8 of this rule.

#### 3.7.15. Identification and Characterization of Potential Borrow Sources.

The application must include an identification and characterization of the potential borrow sources as detailed in section 3.12 of this rule.

#### 3.7.16. Proposed Design and Operation.

The application must include a proposed design based on conclusions outlined in the construction design section of the application as designated in section 3.10 of this rule. A general discussion of the proposed operating procedures must also be included.

### 3.7.17. Landfill Liners.

The application must include plans, drawings, cross-sections, and specifications for a liner system as designated in section 3.11 of this rule.

### 3.7.18. Verification of Application.

The application must include a notarized signature of a principal officer, or ranking public official, verifying that the information contained in the application is true, complete and accurate to the best of that individual's knowledge and belief, based upon inquiry.

## 3.8. General Geologic and Hydrologic Submission Requirements.

### 3.8.1. Site Information.

The application must include the following information regarding the potential site:

3.8.1.a. Total acres of area permitted, or to be permitted;

3.8.1.b. Total acres of disposal area;

3.8.1.c. Planned life of facility;

3.8.1.d. Previous existence or present activities of mines or quarries at the site;

3.8.1.e. A 7.5 minute USGS topographic map, or an eight and one-half inch by eleven inch (8-1/2" x 11") copy of a portion thereof, showing:

3.8.1.e.A. The site and its boundaries;

3.8.1.e.B. The area surrounding the site for at least fifteen hundred (1,500) feet beyond the site boundaries;

3.8.1.e.C. The name of the USGS quadrangle;

3.8.1.e.D. The date of last USGS map revision;

3.8.1.e.E. The latitude and longitude of the center of the disposal area; and

3.8.1.e.F. The location of the items listed in section 3.8.1.1 of this rule, unless such items are instead shown on the large-scale map;

3.8.1.f. A description of the site location;

3.8.1.g. A description of the site terrain;

3.8.1.h. A description of any title, deed, or usage restrictions affecting the proposed permit area;

3.8.1.i. The name of the town nearest to the site;



3.8.1.j. The name of the county, or counties in which the site is, or will be located;

3.8.1.k. A large-scale map -- with a minimum scale of one inch equal to two hundred feet (1 inch = 200 feet) and a maximum contour interval of ten (10) feet -- showing the location of the items listed in section 3.8.1.1 of this rule, unless such items are instead shown on the 7.5 minute topographic map;

3.8.1.1. Map Inclusions. All of the following which occur either within the site boundaries or within fifteen hundred (1,500) feet of the site boundaries or within the distances specified in sections 3.1 and 3.2 of this rule must be indicated on the large-scale map or the 7.5 minute topographic map or both;

3.8.1.1.A. Water supply wells;

3.8.1.1.B. Springs;

3.8.1.1.C. Natural wetlands (e.g., swamps, bogs, marshes);

3.8.1.1.D. Streams;

3.8.1.1.E. Public water supplies;

3.8.1.1.F. Other bodies of water;

3.8.1.1.G. Underground and surface mines (for underground mines, also indicate the subsidence angle of draw, as applicable);

3.8.1.1.H. Mine pool(s) and point(s) of discharge;

3.8.1.1.I. Mine refuse spoil piles, and any impoundment capabilities;

3.8.1.1.J. Quarries or sand and gravel pits;

3.8.1.1.K. Gas and oil wells;

3.8.1.1.L. Surface and groundwater quality monitoring points;

3.8.1.1.M. Occupied or habitable dwellings;

3.8.1.1.N. Roads;

3.8.1.1.O. Power lines, pipelines and other utilities;

3.8.1.1.P. Public buildings;

3.8.1.1.Q. Sinkholes;

3.8.1.1.R. Property boundaries;

3.8.1.1.S. Owners of record both surface and subsurface;

3.8.1.1.T. Easements or right-of-ways; and

3.8.1.1.U. One hundred (100) year floodplain boundary.

3.8.1.1.V. All areas prohibited by section 3.1 of this rule, or for which location standards have been established by section 3.2 of this rule.

### 3.8.2. Soils Information.

Backhoe test pits or drilled test borings must be employed to determine soil types, characteristics, and conditions. A minimum of four (4) test pits or borings for the first ten (10) or less acres and one (1) test pit or boring for each additional ten (10) or less acres must be excavated or drilled on a uniform grid pattern across each proposed disposal area and each proposed borrow source. Test pits or borings for all solid waste facilities must be located so as to identify all soil types distributed over the site. The applicant must provide the following:

3.8.2.a. A list of each soil series and phase present on the site and each borrow source and soil maps with site and borrow source boundaries as an attachment;

3.8.2.b. The soil maps must show the locations of all test pits or borings made to describe soils and determine their depth;

3.8.2.c. A description of soil horizons containing seventy-five percent (75%) or more coarse fragments (as per the Unified Soil Classification System) including:

3.8.2.c.A. Minimum thickness of soil to horizons with seventy-five percent (75%) or more coarse fragments;

3.8.2.c.B. Soil thickness determination procedures; and

3.8.2.c.C. Degree of weathering of coarse fragments.

3.8.2.d. Test pit or excavation descriptions including depth to all horizons, color, texture, structure, consistence, depth to and color of any mottles;

3.8.2.e. Results of laboratory analyses of soil samples taken from test pits or borings including analyses for grain size, pH, permeability, and Atterberg limits for predominate soil types; and

3.8.2.f. A description of the following general soil characteristics;

3.8.2.f.A. Drainage characteristics of soil;

3.8.2.f.B. Maximum slopes at the proposed site; and

3.8.2.f.C. Shallowest depth from surface to mottling.

3.8.2.g. A minimum of four (4) representative samples for the first ten (10) or less acres and one (1) additional sample for each additional ten (10) or less acres must be tested for the relationship of water content to dry density using either the Modified or Standard Proctor method. Each Proctor curve must be developed with a minimum of five (5) points.

3.8.2.h. A minimum of twenty percent (20%) of the samples used to develop the Proctor curves must be used to evaluate soil permeability. This evaluation must be accomplished by determining the maximum density and optimum moisture through a Proctor test (D-698) and then testing for permeability at a dry density between ninety-five percent (95%) and one hundred percent (100%) of the maximum and within four percent (4%) of optimum moisture.

### 3.8.3. Site Geological Information.

A minimum of four (4) test corings must be performed at any landfill site with a permitted surface area of ten (10) or less acres and one (1) additional test coring performed for each additional five (5) acres up to one hundred fifty (150) acres, not to exceed fifteen (15) holes. Any acreage over one hundred fifty (150) acres must require one (1) additional test coring per ten (10) or less acres. Such test corings must be distributed over the entire site area to give an accurate description of subsurface conditions for the area of the site which is intended for use as a landfill. The depth at which coreholes must terminate must be determined by the following: the first coring must be placed in the lowest point of the proposed disturbed area and cored to the uppermost significant aquifer that is to be monitored or corings must penetrate to a minimum depth of one hundred (100) feet in the absence of the aquifer. Upon the completion of drilling, drilling logs for all completed coreholes must be submitted to the director.

3.8.3.a. The site geological analysis must provide the following information:

#### 3.8.3.a.A. Sediments.

3.8.3.a.A.(a) A notation of the presence of any sedimentary deposits under the proposed site including, but not limited to, colluvial, alluvial, or lacustrine;

3.8.3.a.A.(b) A description of the type and texture of unconsolidated materials;

3.8.3.a.A.(c) The thickness of unconsolidated materials including the maximum, minimum, and how the thickness was determined procedurally; and

3.8.3.a.A.(d) A description of the different formations of unconsolidated materials and the effects of these sediments on potential discharges from the landfill;

#### 3.8.3.a.B. Bedrock.

3.8.3.a.B.(a) The formations and names;

3.8.3.a.B.(b) The lithologies including major lithologic names in the area (e.g., Morgantown, Sandstone, Ames Limestone), must be plotted on the large-scale map;

3.8.3.a.B.(c) An indication of all areas where bedrock outcrops within the site and also within fifteen hundred (1,500) feet of the site boundaries on the large-scale map;

3.8.3.a.B.(d) A characterization of the degree of bedrock weathering;

3.8.3.a.B.(e) The shallowest depth from surface to bedrock; and

3.8.3.a.B.(f) For carbonate rock, show any undrained depressions or sinkholes existent on-site or within fifteen hundred (1,500) feet of the site shown on the large-scale map or the 7.5 minute topographic map or both;

#### 3.8.3.a.C. Structure.

3.8.3.a.C.(a) An indication of all of the following types of fracture zones on-site and within fifteen hundred (1,500) feet of the site boundaries on the large-scale map or the 7.5 minute topographic map or both:

3.8.3.a.C.(a)(A) Traces;

3.8.3.a.C.(a)(B) Lineaments;

3.8.3.a.C.(a)(C) Joints; and

3.8.3.a.C.(a)(D) Faults.

3.8.3.a.C.(b) A description of the influence that these fracture zones have on the movement of infiltrated water and groundwater;

3.8.3.a.C.(c) A description of the regional bedrock structures in the area of the site;

3.8.3.a.C.(d) A detailed description of the local bedrock structure. Applicants must construct a structural geologic map with a scale of one inch equal to two hundred feet (1 inch = 200 feet) using the structural contour intervals. For bedrock dip at angles of zero to five degrees, contour intervals must be five (5) feet; for angles of five to thirty degrees, contour intervals must be ten (10) feet; and for angles of greater than thirty (30) degrees, contour intervals must be twenty-five (25) feet. The use of intermediate contours in areas of low structural relief for greater detail is required;

3.8.3.a.C.(e) A description of folding as it applies to the site including strike and plunge of fold axis and location of the site in relation to the local structure;

3.8.3.a.C.(f) The strike and dip of bedding planes;

3.8.3.a.C.(g) A description of the joints and fractures including strike, dip, and open joints and a description of the spacing of the joints;

3.8.3.a.C.(h) A description of all faults located on or within fifteen hundred (1,500) feet of the site boundaries including the strike and dip of faults and an indication of all faults in the area of the site on a map; and

3.8.3.a.C.(i) A minimum of two (2) geologic profiles using bedrock outcrops and corehole information including the vertical exaggeration to adequately illustrate the geology of the site;

**3.8.3.a.D. Mining.**

3.8.3.a.D.(a) A notation of the presence of any abandoned, reclaimed, active, and inactive surface mines on the site;

3.8.3.a.D.(b) A list of any extractable coal seams beneath the site;

3.8.3.a.D.(c) Any abandoned, reclaimed, active or inactive underground mines located on-site or within fifteen hundred (1,500) feet of the site boundaries including minimum depth to mined area, aerial extent of mined area as shown, and type of minerals mined (If coal, give the names of seams.); and

3.8.3.a.D.(d) Any mine maps and related information for mined areas under the site or within fifteen hundred (1,500) feet of the site boundaries.

**3.8.4. Hydrologic Information.** The permittee must install a groundwater monitoring system that consists of a sufficient number of wells (a minimum of four {4}) monitoring wells must be installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer or the uppermost aquifer at all landfill sites. Monitoring wells -- one (1) upgradient and three (3) downgradient -- must monitor the same aquifer. If previously drilled geologic corings are to be used as monitoring wells and the uppermost significant aquifer has been drilled through, then those holes proposed to monitor groundwater must be plugged from the bottom of the hole to the uppermost significant aquifer with a sodium bentonite grout, then properly screened and cased.

**3.8.4.a.** Groundwater monitoring wells must meet the following specifications:

**3.8.4.a.A.** All monitoring well casings and screens must be constructed of a minimum of two (2) inch (inner diameter) Schedule 40 polyvinyl chloride (PVC) plastic pipe, or other casing satisfactory to the director. Lengths of pipe must be joined using threaded couplings. Solvent cement must not be used for PVC couplings. Borehole diameter must be a minimum of six (6) inches larger than the PVC casing. If approved by the director, the borehole diameter may be smaller if proven methods are employed to facilitate the emplacement of the filter pack and annular sealant.

3.8.4.a.B. The screened interval for monitoring wells must consist of a minimum of ten (10) to a maximum of twenty (20) feet of properly sized, preconstructed, commercially available well screen of the same material and diameter as the casing, or screen as approved by the director. The screen is to have a slot size to enable retainment of eighty-five to one hundred percent (85%-100%) of the filter pack material. The bottom of the screen must be capped. Should the uppermost aquifer thickness exceed twenty (20) feet or be comprised of several hydraulically connected formations, then a cluster of wells or some other type of multiple zone monitoring system may be required at the discretion of the director.

3.8.4.a.C. All wells must be sand or gravel-packed (depending on screen size) from the base of the well to a level a minimum of two (2) feet and a maximum of five (5) feet above the top of the screen. An impervious two (2) foot or greater bentonite seal must be installed on top of the gravel packing.

3.8.4.a.D. All wells must be continuously grouted from the top of the impervious seal to above the groundwater table. Wells must not be grouted with cement below the potentiometric surface of the uppermost significant aquifer.

3.8.4.a.E. From below the frost line, the cap must be composed of concrete (using expanding cement) blending into a four (4) inch thick apron extending three (3) feet or more from the outer edge of the borehole.

3.8.4.a.F. Upon completion, all wells must be fully developed and pumped to determine the yield of the well.

3.8.4.a.G. The elevation of the top of the well casing must be two (2) to three (3) feet above the elevation of the ground surface.

3.8.4.a.H. All wells must be properly tagged with permit number, top of casing elevation, well number, and flagged or otherwise made visible so they can be readily located in the field, and avoided by onsite heavy equipment. A survey mark must be placed on the top of the casing at the point utilized for determining elevation.

3.8.4.a.I. All wells must be provided with a means of protection from tampering, vandalism, or damage. At a minimum, protection must be provided by a lockable outer well cap.

3.8.4.a.J. In addition to the requirements of section 3.8.4 of this rule, the monitoring system must be installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer that:

3.8.4.a.J.(a) Represent the quality of background groundwater that has not been affected by leakage from a SWLF.

3.8.4.a.J.(b) A determination of the background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

3.8.4.a.J.(b)(A) Hydrogeologic conditions do not allow the

permittee to determine what wells are hydraulically upgradient; or

3.8.4.a.J. (b) (B) Sampling of other wells will provide an indication of the background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

3.8.4.a.J. (b) (C) Represent a quality of groundwater passing the relevant point of compliance specified by the director under section 4.5.4.a.G of this rule.

3.8.4.a.J. (b) (D) The downgradient monitoring system must be installed at the relevant point of compliance specified by the director under section 4.5.4.a.G of this rule that ensures detection of groundwater contamination in the uppermost aquifer.

3.8.4.a.J. (b) (E) When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing SWLFs, the downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the relevant point of compliance specified by the director that ensure detection of groundwater contamination in the uppermost aquifer.

3.8.4.a.K. The permittee may request the director to approve a multi-unit groundwater monitoring system instead of separate groundwater monitoring systems for each SWLF when the facility has several SWLFs, provided the multi-unit groundwater system meets the requirements of section 3.8.4 of this rule and will be as protective of human health and the environment as individual monitoring systems for each SWLF, based on the permittees' compliance with the following factors:

3.8.4.a.K. (a) Number, spacing, and orientation of the SWLFs;

3.8.4.a.K. (b) Hydrogeologic setting;

3.8.4.a.K. (c) Site history;

3.8.4.a.K. (d) Engineering design of the SWLFs, and

3.8.4.a.K. (e) Type of waste accepted at the SWLFs.

3.8.4.a.L. **Monitoring Well Casing Requirements.** Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of groundwater samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the groundwater.

3.8.4.a.L. (a) The permittee must notify the director that the design, installation, development, and decommission of any monitoring wells, peizometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and

3.8.4.a.L. (b) The monitoring wells, peizometers, and other



measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

**3.8.4.a.M.** The number, spacing, and depths of monitoring systems must be:

**3.8.4.a.M. (a)** Determined based upon site-specific technical information that must include through characterization of:

**3.8.4.a.M. (a) (A)** Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

**3.8.4.a.M. (a) (B)** Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

**3.8.4.a.M. (b)** Certified by a qualified groundwater scientist and approved in writing by the director.

**3.8.4.a.M. (b) (A)** Within fourteen (14) days of this certification, the permittee must notify the director that the certification has been placed in the operating record.

**3.8.4.b. Well Drilling.**

The method used to drill the groundwater monitoring wells must be described in the application. The latitude and longitude of each well to within plus or minus one second and the USGS datum elevation of the top of each well must be included in the application.

**3.8.4.c. Water Table.**

The maximum and minimum depth to the zone of saturation must be included in the application, along with the following:

**3.8.4.c.A.** Seasonal water table fluctuations at the above locations and seeps and springs affected by seasonal changes must be described in the application and the source of information must be referenced;

**3.8.4.c.B.** Perched or special water table conditions must be described in the application;

**3.8.4.c.C.** The minimum depth to a perched water table must be provided in the application.

**3.8.4.c.D.** The occurrence of groundwater drainage to underground mines must be determined and, if found, mine discharges must be identified on the large-scale map or the 7.5 minute topographic map or both, as required under section 3.8.1.1 of this rule.

#### 3.8.4.d. Groundwater Movement.

3.8.4.d.A. A large-scale map (1 inch = 200 feet) showing all groundwater flow directions must be constructed and included in the application. The water table/potentiometric surface must be contoured on this map using an appropriate contour interval.

3.8.4.d.B. The approximate rate of groundwater flow and the method used to determine that rate of flow must be provided in the application.

3.8.4.d.C. The method used to determine groundwater flow directions must be included in the application.

3.8.4.d.D. The location of all groundwater discharge points related to the site must be shown on the large-scale map required under section 3.8.4.d.A of this rule.

3.8.4.d.E. If the site is in a groundwater discharge or recharge zone, this fact must be noted in the application.

3.8.4.d.F. The rate of groundwater flow at the site and its effects on the operation of the proposed facility must be discussed in the application.

#### 3.8.4.e. Groundwater Quality Analyses.

The method of sampling; date and results of the analyses of the water sampled from each groundwater monitoring well at the site must be provided in the application. All sampling procedures must be included in the application and approved by the director. Analyses for the constituents listed in Appendix I; the facility permit; or an order by the director and any other parameter(s) specified by the director in writing must be conducted.

#### 3.8.4.f. Surface Water.

3.8.4.f.A. The name of the nearest stream to the site and its 7Q10 low flow must be included in the application.

**Note:** "7Q10" means the seven (7) consecutive day drought flow with a ten (10) year return frequency, as defined in section 2 of this rule.

3.8.4.f.B. The surface drainage area of the tributary on which the site is located must be plotted on a map and included in the application.

3.8.4.f.C. The estimated peak surface water drainage flow of the tributary on which the site is located for a 25-year, 24-hour storm must be included in the application.

3.8.4.f.D. The maximum and minimum of surface slopes of the tributary on which the site is located must be included in the application.

3.8.4.f.E. The results of an analysis of water from one (1) grab sample from the nearest stream to the site must be included in the

application. This analysis must be performed for the same parameters referenced in section 3.8.4.e of this rule with the addition of total suspended solids.

#### **3.8.5. Water Budget.**

A water budget must be prepared for the periods of time during active operations, when the maximum amount of area has been filled but not capped, and following facility closure at any landfill site. At a minimum, the following factors must be considered in the preparation of the water budget:

- 3.8.5.a. Average monthly temperature;
- 3.8.5.b. Average monthly precipitation;
- 3.8.5.c. Evaporation;
- 3.8.5.d. Evapotranspiration;
- 3.8.5.e. Surface slope and topsoil texture;
- 3.8.5.f. Soil moisture holding capacity and root zone depth;
- 3.8.5.g. Runoff coefficients;
- 3.8.5.h. Moisture contribution from the waste; and
- 3.8.5.i. Any groundwater contribution.

#### **3.8.6. Liners and Leachate Collection System Efficiency.**

The collection efficiency of the leachate collection system at the landfill must be calculated using an approved analytical or numerical method. The factors to be considered in the calculation of collection efficiency must include:

- 3.8.6.a. The saturated hydraulic conductivity of the liner;
- 3.8.6.b. Liner thickness;
- 3.8.6.c. The saturated hydraulic conductivity of the drainage blanket;
- 3.8.6.d. Drainage blanket porosity;
- 3.8.6.e. The base slope of the liner;
- 3.8.6.f. The maximum flow distance across the liner;
- 3.8.6.g. Annual infiltration; and
- 3.8.6.h. Any groundwater inflow.

#### **3.8.7. Leachate Generation.**

Information gained from the collection efficiency calculations must be used to predict the daily volume of leachate collected from the landfill.

### **3.8.8. Waste and Leachate Characterization.**

#### **3.8.8.a. Industrial Wastes.**

Unless otherwise approved, the physical and chemical characteristics of all wastes and leachates must be analyzed and described. When more than one waste is generated, testing shall be performed on each waste stream. All leaching tests must be done in accordance with published test procedures. Physical tests must be done in accordance with ASTM standards or published test procedures. All testing procedures must be documented. The proposed testing program -- including the leaching test method, the leaching media, the parameters to be analyzed for, and the detection limits for each parameter specified -- must be discussed with the director prior to initiation of the work. Actual field leachate data may be substituted for chemical characterization data of the waste at facilities for the disposal of industrial wastes, but only if approved in writing by the director.

#### **3.8.8.b. Municipal Wastes.**

Actual field leachate data from existing facilities of similar size, design, and waste type or an estimate of the anticipated leachate quality available from other sources must be included for all facilities for the disposal of municipal solid waste.

### **3.8.9. Liquid and Non-Liquid Waste Storage.**

All solid waste storage tanks, containers, liquid waste storage tanks and surface impoundments located at solid waste facilities are subject to regulation under section 3.8.9 of this rule.

**3.8.9.a.** An application for a permit to construct and operate a solid waste facility which includes a waste storage area must contain the following:

**3.8.9.a.A.** A description of the non-liquid or liquid waste to be stored;

**3.8.9.a.B.** The estimated volume of the non-liquid or liquid waste generated and a proposed recordkeeping system to record actual quantities stored;

**3.8.9.a.C.** A schedule of stored waste removal;

**3.8.9.a.D.** A description of the final treatment and disposal of the stored waste; and

**3.8.9.a.E.** A description of the storage facility design.

### **3.9. Existing Land Use and Environmental Assessment.**

#### **3.9.1. Land Use Information.**

The application must discuss the present and former land uses at the facility and the surrounding area. A thorough discussion of land uses which may have an impact upon the suitability of the property for waste disposal or affected groundwater quality must be included in the application. The application must address all areas that may affect or be affected by the proposed facility; at a minimum, this will be the area within one (1) mile of the permit area for Class A solid waste facilities and within one-half ( $\frac{1}{2}$ ) mile of the permit area for all other facilities. The presentation of land use information in the application must be supplemented with land use maps and, at a minimum, must specifically address the following:

**3.9.1.a. Adjacent Landowners.**

The identity and location of the adjacent landowners must be discussed in narrative form. This information may be presented on a plat map but must reflect current ownership conditions and any changes must be so noted;

**3.9.1.b. Land Use Zoning.**

The application must provide a review of land use zoning in the area and give particular attention to areas where zoning variances will be required, where agricultural impact statements may be required, or where floodplain, river corridors, or natural wetlands are designated.

**3.9.1.c. Documentation of Present Land Uses.**

The application must include a description of the present land use in the area. Particular emphasis must be placed on the discussion of known recreational, historical, archaeological, or environmentally unique areas. The application must include a letter from the Division's Section of Wildlife Resources addressing the presence of any endangered or threatened species of animal or plant in the vicinity of the proposed facility. The application must include a letter from the West Virginia Division of Culture and History addressing the presence of any historical, scientific, or archaeological areas in the vicinity of the proposed facility. The need for an archaeological survey of the proposed limits of waste fill prior to development must also be addressed in the application.

**3.9.1.d. Transportation and Access.**

Present and proposed transportation routes and access roads, including any weight restrictions, must be delineated in the application.

**3.9.2. Environmental Review.**

The application must include an environmental assessment section which addresses the following items:

**3.9.2.a. Project Summary.**

The application must include a brief summary of the project, with particular attention given to the following:

**3.9.2.a.A. The purpose and need for the proposed facility**

including the history and background of the project;

3.9.2.a.B. A listing of the statutory authority and other relevant local, state, and federal permits or approvals required for the proposed facility as well as a discussion of the need for exemptions, zoning changes, and any other special permits; and

3.9.2.a.C. The estimated cost and funding source for the facility.

**3.9.2.b. Proposed Physical Changes.**

The application must include a brief description of the proposed physical changes that will result from the project, with particular attention given to the following:

3.9.2.b.A. The changes in terrestrial resources including the quantity of material to be excavated and the lateral extent of soil removal. This discussion must also cover the quantity and source of materials to be imported for construction of the liner, final cover system, drainage blanket and perimeter berms. Any other significant terrestrial modifications such as soil placement necessary to reach the proposed sub-base grades, construction of access roads, surface water drainage features, and sedimentation controls must also be outlined;

3.9.2.b.B. The changes in aquatic resources including the potential impacts to streams, existing wetlands, lakes, and drainage basin. This discussion must include discharge rates and volumes for groundwater control structures, leachate collection systems, and surface water runoff under existing conditions as well as that anticipated during active operation and following closure of the facility;

3.9.2.b.C. Buildings, treatment units, roads, and other structures to be constructed in conjunction with the facility. This discussion must include the size of the facilities and the number of miles of road to be constructed;

3.9.2.b.D. Emissions and discharges such as dust, diesel exhaust, odors, gases, leachate, surface water runoff, and collected groundwater associated with facility preparation, construction, operation, closure, and following closure of the facility;

3.9.2.b.E. Other changes anticipated with facility development; and

3.9.2.b.F. Maps, plans, and other descriptive material to clarify the discussion such as a county map showing the general area of the project, a USGS topographic map, a plat map, zoning map, county natural wetlands map, and a facility development plan.

**3.9.2.c. Existing Environment.**

The application must include a brief description of the existing environment that may be affected by the project, with particular attention

given to the following:

3.9.2.c.A. The physical environment including the regional and local topography, geology, surface water drainage features, hydrogeologic conditions, air, natural wetlands, and earth borrow sources as well as an evaluation of the groundwater quality data and overall performance of any existing solid waste facility;

3.9.2.c.B. The dominant aquatic and terrestrial plant and animal species and habitats found in the area including any threatened or endangered species and the amount, type, and hydraulic value of natural wetlands;

3.9.2.c.C. Land use information including dominant features and zoning in the area;

3.9.2.c.D. Social and economic conditions including any ethnic or cultural groups;

3.9.2.c.E. Other special resources such as archaeological, historical, state natural areas, and prime agricultural lands; and

3.9.2.c.F. Public and private drinking water supplies.

**3.9.2.d. Environmental Consequences.**

The application must include a brief discussion of the probable adverse and beneficial impacts of the project, including primary, indirect, and secondary impacts, with particular attention given to the following:

3.9.2.d.A. The physical impacts which would be associated with facility design, construction, and operation, including visual impacts if applicable;

3.9.2.d.B. The biological impacts including destruction and creation of habitat, alteration of the physical environment and any impacts to endangered or threatened species;

3.9.2.d.C. The impacts on land use;

3.9.2.d.D. The social and economic impacts to local residents, cultural groups, and the communities and industries served by the facility;

3.9.2.d.E. Other special resources such as archaeological, historical, state natural areas, and prime agricultural lands; and

3.9.2.d.F. Probable adverse impacts that cannot be avoided including groundwater and surface water impacts, modifications of topography and any borrow source limitations on development around the facility, any loss of agricultural or forest land, displacement of wildlife, and adverse aesthetic impacts for people in and around the facility.

**3.10. Proposed Landfill Design.**

3.10.1. Report Preparation. The application must include a report



describing the proposed landfill design. At a minimum, this report must include the following:

3.10.1.a. Preliminary materials balance calculations, including sources for berms, liner, final cover system, drainage blanket, topsoil, daily and intermediate cover, and any other fill needed to construct the facility;

3.10.1.b. The proposed methods for leachate and gas control including collection, containment, and treatment. The capability of the wastewater treatment plants to accept leachate must be discussed and an identification made of the wastewater treatment plants the applicant is negotiating with to accept the leachate, if the plant is not directly controlled by the applicant;

3.10.1.c. The proposed operating procedures including the method of facility development, filling sequence, access control for each phase, surface water control, waste screening, covering frequency, as applicable, exclusion of hazardous wastes and other special design features;

3.10.1.d. A description of the proposed groundwater, leachate, surface water, gas, air, unsaturated zone, and other monitoring programs to be implemented to meet the requirements of section 4.11 of this rule;

3.10.1.e. The proposed closure plan and final use as specified in section 6.1 of this rule;

3.10.1.f. The proposed method of demonstrating financial responsibility for closure, post-closure care and corrective action requirements including preliminary itemized cost estimates for land acquisition, facility preparation, construction of each major phase, daily operation, closure, post-closure care and corrective action. An estimated cost per ton for disposal must also be included;

3.10.1.g. Proposed design for access roads;

3.10.1.h. Proposed design for drainage and sediment control; and

3.10.1.i. Proposed revegetation plan including seed mixture, seed bed preparation, fertilizers, mulching, and maintenance schedule.

3.10.2. **Preliminary Engineering Plans.** The preliminary engineering design must be presented on twenty-four inch by thirty-six inch (24" x 36") plan sheets (unless an alternative size is approved by the director in writing) as follows:

3.10.2.a. Proposed access, lateral extent of filling, phases of facility development, sub-base and base grades, slopes and the leachate collection system. The existing conditions map must be used as a base map for this plan sheet;

3.10.2.b. A plan sheet showing present topography, proposed base and sub-base grades, final grades, and liner and final cover system configuration displayed on all geologic cross-sections intersecting the landfill;

3.10.2.c. A monitoring plan sheet showing the proposed groundwater, leachate, surface water, gas, air unsaturated zone, and any other monitoring programs;

3.10.2.d. A drainage plan sheet showing:

3.10.2.d.A. The directional flow of water on and away from the land to be affected;

3.10.2.d.B. The location of all erosion and sedimentation control structures;

3.10.2.d.C. The component drainage area together with a table showing total acreage and disturbed acreage within each component; and

3.10.2.d.D. A sediment structure table showing type of sediment control structure, total contributing drainage area (acres), disturbed acreage controlled by total disturbance in the drainage area (acres), and storage capacity (acre-feet);

3.10.2.e. A detailed plan sheet showing proposed closure sequence and final grades;

3.10.2.f. A plan sheet showing the details of proposed design features for the major engineering structures at the facility; and

3.10.2.g. A plan sheet for any blasting that must be conducted at the facility. All blasting operations must comply with the following:

3.10.2.g.A. The blasting must be done during clear weather and during times when there is minimal traffic;

3.10.2.g.B. The blasting contractor must follow current blasting laws, regulations, rules of the state, federal, and local authorities and all appropriate regulatory agencies must be notified.

3.10.2.g.C. Adjacent residents and property owners and the proper local authorities must be properly informed about and notified of the upcoming blast operations;

3.10.2.g.D. The blasting contractor must initiate or employ a smooth blasting technique by using explosives with low charge concentration. Drilling patterns must be closely spaced with an appropriate blast hole diameter in a square or staggered drilling pattern. Blast hole design must depend on current field conditions;

3.10.2.g.E. To reduce ground vibration and excessive air blast, the contractor must employ a proper delay timing; use appropriate decking of charges and explosive powder factors applicable to the rock types being blasted;

3.10.2.g.F. The contractor must not blast below maximum approved elevations. The under-drilled few feet of the blast holes must not be loaded with explosives; and

3.10.2.g.G. Blasting must not be conducted on Sunday.

3.10.3. Sequencing of Solid Waste Disposal.

3.10.3.a. Solid Waste Placement Schedule.

The sequence of solid waste disposal must be specified in a schedule of solid waste placement which must be approved by the director. The solid waste placement schedule must correspond to a horizontal control grid system, with grid elements having maximum dimensions of two hundred (200) feet square. The horizontal control grid system must be referenced to a permanent physical marker or object on the site, with vertical control referenced to an elevation established for the marker. The solid waste placement schedule must specify the order in which grid elements (maximum two hundred (200) square feet in size) will be used for solid waste disposal for each lift of every solid waste fill area.

3.10.3.b. Solid Waste Disposal Coordination.

The schedule of solid waste placement must be coordinated with the construction of on-site access roads, surface water drainage systems, leachate collection systems and other facility construction in solid waste fill areas.

3.11. Landfill Liners.

3.11.1. Performance Standards.

The application must contain plans, drawings, cross-sections, and specifications for a liner system to demonstrate compliance with performance standards and other requirements of this rule, including, but not limited to section 4.5.4 of this rule, and including the following:

- 3.11.1.a. The design of the liner system;
- 3.11.1.b. The thickness and characteristics of the subbase;
- 3.11.1.c. The thickness and characteristics of the leachate detection zone;
- 3.11.1.d. The design for the leachate monitoring system in the leachate detection zone;
- 3.11.1.e. The nature and thickness of the liner material;
- 3.11.1.f. The thickness and characteristics of the leachate collection zone;
- 3.11.1.g. The design for the leachate collection system in the collection zone;
- 3.11.1.h. The thickness and characteristics of the protective cover;  
and
- 3.11.1.i. A plan for installing the liner system.

### **3.11.2. Q.A./Q.C. Plan.**

The application must include a quality assurance and quality control (Q.A./Q.C.) plan for the construction and installation of the liner system. At a minimum, the Q.A./Q.C. plan must include:

**3.11.2.a.** A description of the testing procedures and construction methods proposed to be implemented during construction of the liner system;

**3.11.2.b.** A description of the manner in which the protective cover and liner system will be maintained and protected in unfilled portions of the disposal area prior to and during placement of the initial lift of solid waste; and

**3.11.2.c.** A description of the manner in which the protective cover and liner system will be protected from weather prior to and during placement of the initial lift of solid waste.

### **3.11.3. Leachate Considerations.**

The application must demonstrate that leachate will not adversely affect the physical or chemical characteristics of the proposed liner system, or inhibit the liner's ability to restrict the flow of solid waste, solid waste constituents or leachate, based on the most recent edition of EPA Method 9090, Compatibility Test for Wastes and Membrane Liners, or other documented data.

### **3.12. Identification and Characterization of Potential Borrow Sources for Landfills.**

#### **3.12.1. General.**

The application must contain a description of each proposed borrow source for liner and capping purposes including the volume of acceptable material, total acreage, ownership, location, present land use, transportation routes and any access restrictions, travel distance from the proposed waste disposal facility, surface water drainage patterns, and significant hydrologic features such as surface waters, springs, drainage divides, and natural wetlands.

#### **3.12.2. Field and Laboratory Investigations.**

At a minimum, preliminary field and laboratory investigations to define the physical characteristics of the proposed borrow material must include the information specified in section 3.8.2 of this rule unless an alternative geotechnical investigation program is approved by the director in writing. Applicants may submit an alternative program in cases where previous information exists regarding the proposed source.

#### **3.12.3. Data Presentation.**

The following information must be submitted as part of the application:

**3.12.3.a.** The calculated volume of acceptable material based on the information obtained from the test pits or borings;

3.12.3.b. Property boundaries and test pit/boring locations shown on a map based upon a USGS topographic map, or other equivalent map, with a scale of one inch equal to five hundred feet (1 inch = 500 feet). The mapped area must extend a minimum of five hundred (500) feet beyond the proposed borrow source;

3.12.3.c. An isopach map showing the thickness of acceptable material;

3.12.3.d. A description of the methods to be used for separating the acceptable materials from any unacceptable materials;

3.12.3.e. A proposal for maintaining drainage, sedimentation control, and proper abandonment of the property, including the introduction and maintenance of vegetation which conforms to the minimum requirements of section 4.5.6 of this rule; and

3.12.3.f. All data obtained from the testing program.

**Note:** It may be necessary to obtain federal, state, or local permits prior to excavating materials from a borrow source near or within surface waters or natural wetlands. It is the responsibility of the applicant or property owner to obtain any such permits.

### **3.13. Bonding and Financial Assurance for Solid Waste Facilities.**

The mechanisms used to demonstrate financial assurance under this section must ensure that the funds necessary to meet the costs of closure, post-closure care, and corrective action for known releases will be available whenever they are needed, and include the requirements of sections 3.13.14, 3.13.15 and 3.13.16 of this rule, and

#### **3.13.1. Requirements for Commercial Solid Waste Facilities.**

**Note:** Non-commercial solid waste facilities are exempt from the requirements of section 3.13 of this rule.

3.13.1.a. The director will not approve a new, reissued, renewed, or modified permit for a commercial solid waste facility unless the applicant first submits to the director a bond or other form of financial assurance, as applicable, in accordance with this rule and the bond or other form of financial assurance is approved by the director.

3.13.1.b. The bond or financial assurance must be submitted after the application is approved but before the permit, modification, transfer, assignment, or other permitting function is approved or issued. No permit will be issued until the bond or financial assurance is approved by the director and is in full force and effect.

3.13.1.c. A person who holds a valid division permit to conduct a commercial solid waste activity but wishes to modify, transfer, assign, or perform any other permitting function must comply with section 3.13.1.b of this rule, on the effective date of this section must file a bond or other type of financial assurance with the director prior to receiving the approval

of the director for the permit, modification or other permitting function as required under this rule.

**3.13.1.d. Applicability.**

The requirements of this section apply to permittees of all SWLFs, except as provided in section 3.13.1. The requirements of this section are effective on the date specified in 40 CFR Part 258 Section 70(b), as amended. If a state or federal government entity should become a permittee in the State of West Virginia, they will be exempt from the requirements of this section, since their debts and liabilities are the debts and liabilities of the state or the United States.

**3.13.2. General Bonding and Financial Assurance Requirements.**

**3.13.2.a.** All forms of financial assurance and bonds must be submitted under the requirements of this rule on a form prepared and furnished by the director, must be made payable to the State of West Virginia, and must provide for continuous liability from the initiation of operations at the facility for the full term of the permit and for at least thirty (30) years after final closure of the permit site. Any further time period required to achieve compliance with the requirements of the closure plan of the permit or other requirements of the division must be considered an additional liability period.

**3.13.2.a.A.** The use of any of the mechanisms listed in section 3.13 of this rule, must ensure the satisfaction of the following criteria:

**3.13.2.a.A.(a)** That the amount of funds assured is sufficient to cover the costs of closure, post-closure care, and corrective action for known releases when needed;

**3.13.2.a.A.(b)** That funds will be available in a timely fashion when needed;

**3.13.2.a.A.(c)** The financial assurance mechanism(s) must in full force and effect be by the effective date of these requirements or prior to the initial receipt of solid waste, whichever is later, in the case of closure and post-closure care, and no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of section 4.11.7 of this rule, until the permittee is released from the financial assurance requirements under sections 3.13.14, 3.13.15, and 3.13.16 of this rule.

**3.13.2.a.A.(d)** The financial assurance mechanisms must be legally valid, binding, and enforceable under state and federal law.

**3.13.2.b.** If a permit applicant elects to offer a certificate or securities as a form of financial assurance or bond, then the cash deposit or market value of such securities or certificates must be equal to or greater than the sum of the bond.

**3.13.2.c.** All forms of financial assurance or bonds must be conditioned on compliance with the Solid Waste Management Act, any rules

promulgated thereunder, orders issued by the director, and the terms and conditions of the permit.

3.13.2.d. All forms of financial assurance or bonds will be reviewed for legality and form in accordance with established division procedures.

3.13.2.e. All forms of financial assurance, or bonds will be placed with the state treasurer to be held in the name of the state in trust for the purpose for which the deposit is made when the permit is issued.

3.13.2.f. With the director's permission, the permittee may remove the deposit if it is first replaced with an equivalent or greater deposit.

3.13.2.g. If for any reason a permittee fails to maintain proper financial assurance or bonding, the director will issue a cease and desist order and revoke the permit and the permittee becomes fully liable for the amount of the bond.

3.13.2.h. The penal sum of any financial assurance must be in an amount at least equal to the sum of the current closure, post-closure care and/or corrective action cost estimate; as applicable.

**3.13.3. Other Allowable Mechanisms of Financial Assurance or Bonding.**

3.13.3.a. The director will accept the following types of financial assurance or bonding:

3.13.3.a.A. A surety bond;

3.13.3.a.B. A collateral bond (including cash and securities);

3.13.3.a.B.(a) Cash deposits;

3.13.3.a.B.(b) Collateral securities;

3.13.3.a.B.(c) Certificates, including;

3.13.3.a.B.(c)(A) Bonds of the United States or its possessions;

3.13.3.a.B.(c)(B) Bonds of the Federal Land Bank;

3.13.3.a.B.(c)(C) Bonds of the Homeowners Loan Corporation;

3.13.3.a.B.(c)(D) Full Faith and General Obligation bonds of the State of West Virginia or other states and of any West Virginia county, district, or municipality, or of other states;

3.13.3.a.C. Escrow Account. An escrow account;

3.13.3.a.D. Collateral bonds; including;

3.13.3.a.D.(a) Letters of credit;



3.13.3.a.D.(b) Certificates of deposit; and

3.13.3.a.D.(c) Negotiable bonds.

3.13.3.a.E. Performance bonding fund participation (as established by the director);

3.13.3.a.F. Trust Fund.

3.13.3.a.G. State-Approved Mechanism (Reserved)

3.13.3.a.H. State Assumption of Responsibility (Reserved).

3.13.3.a.I. Use of Multiple Financial Mechanisms.

**3.13.4. Special Terms and Conditions for Surety Bonds Guaranteeing Payment or Performance.**

A permittee may demonstrate financial assurance for closure, post-closure care, or corrective action by obtaining a payment or performance surety bond which conforms to the requirements of this section.

3.13.4.a. The director will not accept the bond of a surety company that has failed, or unduly delayed, as determined by the director, in making payment on a forfeited surety bond.

3.13.4.a.A. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

3.13.4.b. The director will accept only the bond of a surety authorized to do business in this state when the surety bond is signed by an appropriate official of the surety as determined by the director. If the principal place of business of the surety is outside of this state, the surety bond must also be signed by an authorized resident agent of the surety.

3.13.4.c. The bond must provide that full payment will be made under the bond within thirty (30) days of receipt of the division's declaration of forfeiture by the surety.

3.13.4.d. The director will not accept surety bonds from a surety company when the total bond liability to the division for bonds filed by the permittee, the principal and related parties exceed the surety company's single risk limit.

3.13.4.d.A. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the permittee and to the director 120 days in advance of cancellation.

3.13.4.d.A.(a) If the surety cancels the bond, the permittee must obtain alternative financial assurance as specified in this section.

3.13.4.d.A.(b) The permittee may cancel the bond only if alternative financial assurance is substituted as specified in this section or

if the permittee is no longer required to demonstrate financial responsibility in accordance with sections 3.13.14.b, 3.13.15.b, or 3.13.16.b of this rule.

3.13.4.e. The bond must provide that the surety and the principal are jointly and severally liable for payment of the bond amount.

**3.13.4.f. Surety Bond Forfeiture.**

3.13.4.f.A. The director will provide in the bond that the amount must be confessed to judgment and execution upon forfeiture.

3.13.4.f.B. Any surety bond obtained by the permittee must state that the surety will become liable on the bond obligation should the permittee fail to perform as guaranteed by the bond.

3.13.4.g. The division will retain, during the term of the bond, and upon forfeiture of the bond, a property interest in the surety's guarantee of payment under the bond which may not be affected by the bankruptcy, insolvency, or other financial incapacity of the permittee or principal on the bond.

3.13.4.h. The bond must provide that the surety will give written notice to the principal and the division within ten (10) days of a notice received or an action filed by or with a regulatory agency having jurisdiction over the surety alleging one of the following:

3.13.4.h.A. The insolvency or bankruptcy of the surety.

3.13.4.h.B. Violations of regulatory requirements applicable to the surety, when as a result of the violations, suspension or revocation of the surety's license to do business in this state or another state is under consideration by the regulatory agency.

**3.13.4.i. Surety Bonds for Corrective Action, Closure and Post-Closure Care.**

3.13.4.i.A. A permittee may demonstrate financial assurance for corrective action, closure and post-closure care by obtaining a performance bond which conforms to the requirements of this section.

3.13.4.i.B. A bond for corrective action must be effective before the initial receipt of waste, or before the effective date of this rule, whichever is later.

3.13.4.i.C. A bond for closure or post-closure care, must be effective no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of section 4.11.7.

**3.13.4.j. Standby Trust Fund.**

3.13.4.j.A. As provided in part 3.13.4.j. of this rule, the permittee must establish a standby trust fund.

3.13.4.j.B. The standby trust fund must meet the requirements of

section 3.13 of this rule, except the requirements for initial payment and subsequent annual payments specified in section 3.13.11.a of this rule.

3.13.4.k.B. Payments made under the terms of the bond will be deposited by the surety directly into the standby trust fund.

3.13.4.k.C. Payments from the trust fund must be approved by the trustee.

**3.13.5. General Terms and Conditions for Collateral Bonds.**

3.13.5.a. The applicant may submit a collateral bond in one or more of the following forms:

3.13.5.a.A. Cash deposits.

3.13.5.a.B. Certified checks, cashier's checks, or treasurer's checks which are issued, drawn on or certified by a bank or banking institution authorized to do business in this state.

3.13.5.a.C. Automatically renewable and assignable certificates of deposit from banks or banking institutions authorized to do business in this state.

3.13.5.a.D. Automatically renewable, irrevocable standby letters of credit from banks or banking institutions authorized to do business in this state.

3.13.5.a.E. Negotiable bonds of the United States Government; the Federal Land Bank; the Homeowners Loan Corporation; and Full Faith and General Obligation bonds of the State of West Virginia or other states, and of any West Virginia county, district, municipality, or of other states.

3.13.5.b. The market value of the collateral deposited must be at least equal to or greater than the sum of the required bond amount.

3.13.5.c. The director will place collateral submitted under this rule with the state treasurer, who is responsible for its custody and safe keeping until released or collected and deposited in an appropriate fund designated by the director.

3.13.5.d. Collateral must be in the name of the permittee, and pledged and assigned to the state free and clear of claims or rights. The pledge or assignment must vest in the state a property interest in the collateral which must remain until released under the terms of this rule, and may not be affected by the bankruptcy, insolvency, or other financial incapacity of the permittee.

3.13.5.e. The state will ensure that its ownership rights to collateral deposited are established to make the collateral readily available to the state upon forfeiture. The director may require proof of ownership, and other means such as secondary agreements, as he or she deems necessary to meet the requirements of this rule. If the director determines that collateral deposited does not meet the requirements of this rule, he or she

may take action under the law to protect the state's interest in the collateral.

### **3.13.6. Collateral Bonds; Escrow.**

3.13.6.a. The director may authorize the permittee to establish an escrow account deposited in one or more federally-insured accounts payable on demand only to the director, or directly deposited with the director.

3.13.6.b. Escrow funds deposited in federally-insured accounts must not exceed the maximum insured amount under applicable federal insurance programs such as the Federal Deposit Insurance Corporation (F.D.I.C.) or the Federal Savings and Loan Insurance Corporation (F.S.L.I.C.).

3.13.6.c. Interest paid on an escrow account must be retained in the escrow account and applied to the bond value of the escrow account unless the director has approved that the interest be paid to the permittee. In order to qualify for interest payment, the permittee must request such action in writing during the permit application process.

### **3.13.7. Collateral Bonds; Letters of Credit.**

A permittee may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this section.

3.13.7.a. Bank letters of credit submitted as collateral for collateral bonds are subject to the following conditions:

3.13.7.a.A. The letter of credit must be a standby or guarantee letter of credit issued by a federally-insured or equivalently protected bank or banking institution authorized to do business in this State. The letter of credit may not be issued without a credit analysis substantially equivalent to a credit analysis applicable to a potential borrower in an ordinary loan situation. A letter of credit so issued must be supported by an applicant's unqualified obligation to reimburse the issuer for monies paid under the letter of credit.

3.13.7.a.B. The letter of credit must be irrevocable, and must be so designated. The letter of credit must be issued for a period of at least one year in an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable, except as provided in section 3.13.11.a of this rule.

3.13.7.a.B.(a) The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless the issuing institution has canceled the letter of credit by sending notice of cancellation by certified mail to the permittee and to the director 90 days in advance of cancellation.

3.13.7.a.B.(b) If the letter of credit is canceled by the issuing institution, the permittee must obtain alternative financial assurance or bonding.

3.13.7.a.B.(c) The permittee may cancel the letter of credit only if alternative financial assurance or bonding is substituted as specified in this section or if the permittee is released from the requirements of this section in accordance with sections 3.13.14.b, 3.13.15.b, or 3.13.16.b of this rule.

3.13.7.a.B.(d) A letter from the permittee referring to the letter of credit by number, issuing institution, and date, and providing the following information: name, and address of the facility, and the amount of funds assured, must be included with the letter of credit in the operating record.

3.13.7.a.C. The director may not accept letters of credit issued for an applicant when the amounts of the letter of credit, aggregated with other loans and credits extended to the applicant, exceeds the issuer's legal lending limit for that applicant as defined in the United States Banking Code (12 U.S.C. §§21-220).

3.13.7.a.D. Letters of credit must name the West Virginia Division of Environmental Protection as beneficiary and must be payable to the division upon demand, in part or in full, upon presentation of the division's drafts, at sight. The division's right to draw upon the letter of credit does not require documentary or other proof by the division that the applicant has violated the conditions of the bond, the permit, or another requirement.

3.13.7.a.E. The director will not accept letters of credit from a bank which has failed or delayed in making payment on a letter of credit previously submitted as collateral to the division.

3.13.7.b. The director will not accept letters of credit from a bank for any person, for all permits held by that person, in excess of three (3) times the company's maximum single obligation as provided by state law.

3.13.7.c. The director will provide in the indemnity agreement that the amount will be confessed to judgement upon forfeiture.

3.13.7.d. The letter of credit must provide that:

3.13.7.d.A. The bank will give prompt notice to the permittee and the director of any notice received or action filed alleging the insolvency or bankruptcy of the bank, or alleging any violations of regulatory requirements which could result in suspension or revocation of the bank's charter or license to do business.

3.13.7.d.B. In the event the bank becomes unable to fulfill its obligations under the letter of credit for any reason, notice must be given immediately to the permittee and the director.

3.13.7.d.C. Upon the incapacity of a bank by reason of bankruptcy, insolvency, suspension or revocation of its charter or license, the permittee must be deemed to be without bond coverage. The director must issue an order against any operator who is without bond coverage. The notice will specify the period within which bond coverage must be replaced. If the permittee cannot replace the bond within the specified period of time, then

the director must immediately revoke the permit. The permittee will be fully liable for the amount of the bond coverage.

**3.13.7.d.D.** The estimated bond value of all collateral posted as bond assurance will be subject to a margin bond value to market value ratio as determined by the director. This margin will reflect legal and liquidation fees, as well as value depreciation, marketability and fluctuations which might affect the net cash available to the director in performing closure or other remedial measures. The bond value of collateral may be evaluated at any time, but must be evaluated as part of permit renewal. In no case may the bond value exceed the market value.

**3.13.7.e.** The issuing bank must waive the rights of setoff or liens which it has or might have against the letter of credit.

**3.13.7.f.** If the director collects an amount under the letter of credit due to failure of the permittee to replace the letter of credit after demand by the director, the division will hold the proceeds as cash collateral.

**3.13.7.g.** After the letter of credit is approved by the director, the permittee must retain a copy of the letter of credit in the facility operating record.

**3.13.7.h.** The letter of credit must be effective before the initial receipt of waste or before the effective date of this section, whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of section 4.11.7 of this rule.

**3.13.7.i.** The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

### **3.13.8. Collateral Bonds; Certificates of Deposit.**

**3.13.8.a.** Certificates of deposit submitted as collateral for collateral bonds are subject to the following conditions:

**3.13.8.a.A.** The certificates of deposit must be made payable to the division or the permittee and the division and must be assigned to the division by the permittee, in writing, as required by the director and on forms provided by the director. The assignment must be recorded upon the books of the bank issuing the certificate.

**3.13.8.a.B.** The certificate of deposit must be issued by a federally-insured or equivalently protected bank or banking institution which is authorized to do business in this state.

**3.13.8.a.C.** The director will not accept certificates of deposit from a bank or banking institution when the accumulated total of certificates of deposit issued by the bank or banking institution for the operator is in excess of one hundred thousand dollars (\$100,000), or the maximum insurable amount as determined by the F.D.I.C. or the F.S.L.I.C., if the banking

institution is insured by the F.D.I.C. or F.S.L.I.C. If it is insured by an equivalent method administered by the state, similar limits apply.

**3.13.8.a.D.** The certificate of deposit must state that the bank issuing it waives the rights or setoff or liens which it has or might have against the certificate.

**3.13.8.a.E.** The certificate of deposit must be automatically renewable and fully assignable to the state. Certificates of deposit must state on the face that they are automatically renewable.

**3.13.8.a.F.** The permittee must submit certificates of deposit in amounts which will allow the division to liquidate the certificates prior to maturity, upon forfeiture, for the full amount of the bond determined in accordance with and required by this rule, without penalty to the division.

**3.13.8.a.G.** The director will not accept certificates of deposit from banks which have failed or unduly delayed in making payment on certificates of deposit which have previously been submitted as collateral to the division.

**3.13.8.a.H.** The permittee is not entitled to interest accruing after forfeiture is declared by the division, unless and until the forfeiture declaration is ruled invalid by a court having jurisdiction over the division, and the ruling is final.

### **3.13.9. Collateral Bonds; Negotiable Bonds.**

**3.13.9.a.** Negotiable bonds submitted and pledged as collateral for collateral bonds are subject to the following conditions:

**3.13.9.a.A.** The director may determine the current market value of governmental securities for the purpose of establishing the value of the securities for bond deposit.

**3.13.9.a.B.** The current market value must be at least equal to the amount of the required bond.

**3.13.9.a.C.** The division may periodically revalue the securities and may require additional amounts if the current market value is insufficient to satisfy the bond amount requirements for the facility.

**3.13.9.a.D.** The permittee may request and receive the interest accruing on governmental securities with the division as the same becomes due and payable. No interest will be paid for post-forfeiture interest accruing during appeals and after resolution of the appeals, when the forfeiture is adjudicated, decided, or settled in favor of the state.

### **3.13.10. Use of Multiple Mechanisms**

**3.13.10.a.** The director may accept financial assurance or bond which is comprised of more than one financial mechanism per facility, as listed in this rule, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at



least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable.

3.13.10.a.A. The instruments chosen must be construed as part of the entire bond for the facility.

3.13.10.a.B. The director may refuse to accept the bond if he or she determines that the financial guarantee of the bond is unacceptable, or for another reason does not meet the purposes of the Act, this rule, or orders of the director.

3.13.10.a.C. The financial test and a guarantee provided by a corporate parent, sibling, or grandparent may not be combined if the financial statements of the two firms are consolidated.

3.13.11. Other Forms of Bonding, Other forms of bonding including, but not limited to;

3.13.11.a. Trust Fund.

3.13.11.a.A. A permittee may satisfy the requirements of this section by establishing a trust fund which conforms to the requirements of this section.

3.13.11.a.A.(a) The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

3.13.11.a.A.(b) A copy of the trust agreement must be placed in the facility's operating record.

3.13.11.a.B. Payment into the trust fund must be made annually by the permittee over the term of the initial permit or over the remaining life of the SWLF, whichever is shorter, in the case of a trust fund for closure or post-closure care, or over one-half of the estimated length of the corrective action program in the case of corrective action for known releases. This period is referred to as the pay-in period.

3.13.11.a.C. For a trust fund used to demonstrate financial assurance for closure and post-closure care, the first payment into the trust fund must be at least equal to the current cost estimate for closure and post-closure care, except as provided in section 3.13.11.c of this rule, divided by the number of years in the corrective action pay-in period as defined in section 3.13.11.a.B of this section.

3.13.11.a.D. The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{Y}$$

where CE is the current cost estimate for closure or post-closure care (updated for inflation or other changes), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in

period.

3.13.11.a.E. For a trust fund used to demonstrate financial assurance for corrective action, the first payment into the trust fund must be at least equal to one-half of the current cost estimate for corrective action, except as provided in section 3.13.11.c of this rule, divided by the number of years in the corrective action pay-in period as defined in section 3.13.11.a.B of this rule.

3.13.11.a.E.(a) The amount of subsequent payments must be determined by the following formula:

$$\text{Next Payment} = \frac{\text{RB}-\text{CV}}{\text{Y}}$$

where RB is the most recent estimate of the required trust fund balance for corrective action (i.e., the total costs that will be incurred during the second half of the corrective action period), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

3.13.11.a.F. The initial payment into the trust fund must be made before the initial receipt of waste or before the effective date of section 40 CFR Part 258.70(b), whichever is later, in the case of closure and post-closure care, or no later than 120 days after the corrective action remedy has been selected in accordance with the requirements of section 4.11.7 of this rule.

3.13.11.a.G. If the permittee establishes a trust fund after having used one or more alternative mechanisms specified in this section, the initial payment into the trust fund must be at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of section 3.13.11 of this rule.

3.13.11.a.H. The permittee, or other person authorized to conduct closure, post-closure care, or corrective action activities may request reimbursement from the trustee for these expenditures.

3.13.11.a.H.(a) Requests for reimbursement will be granted by the trustee only if sufficient funds are remaining in the trust fund to cover the remaining costs of closure, post-closure care, or corrective action, and if justification and documentation of the cost is placed in the operating record.

3.13.11.a.H.(b) The permittee must notify the director that the documentation of the justification for reimbursement has been placed in the operating record and that reimbursement has been received.

3.13.11.a.I. The trust fund may be terminated by the permittee only if the permittee substitutes alternative financial assurance as specified in this section or if he or she is no longer required to demonstrate financial responsibility in accordance with the requirements of sections 3.13.14.b, 3.13.15.b, or 3.13.16.b of this rule.

3.13.11.b. State-Approved Mechanism. (Reserved)

3.13.11.c. State Assumption of Responsibility. (Reserved)

3.13.12. Replacement of Existing Bond.

3.13.12.a. The director may allow a permittee to replace an existing surety or collateral bond with another surety or collateral bond, if the liability which has accrued against the bond, the permittee and the facility is transferred to the replacement bond. The replacement bond must include an endorsement by the permittee acknowledging the retroactivity of the liability to the date of issue of the original solid waste permit or a prior date determined by the director. The bond amount for this replacement bond will be determined under this rule, but may not be less than the amount on deposit with the division.

3.13.12.b. The division will not release existing bonds until the permittee has submitted and the director has approved acceptable replacement bonds that are in full force and effect. A replacement of bonds under section 3.13.12 of this rule does not constitute a release of bond under this rule.

3.13.13. Bond Amounts.

3.13.13.a. In accordance with the provisions of W. Va. Code §22-15-12, all permits must be bonded for at least ten thousand dollars (\$10,000), or a sufficient amount to satisfy all of the requirements of this rule, whichever is the higher amount.

3.13.14. Financial Assurance for Closure.

3.13.14.a. The permittee must have a detailed written estimate, in current dollars, of the cost of hiring a third party to close the largest area of all SWLFs ever requiring a final cover as required under section 6 of this rule at any time during the active life in accordance with the closure plan.

3.13.14.a.A. The permittee must notify the director in writing of that estimate and maintain a copy in the operating record.

3.13.14.a.A.(a) The cost estimate must equal the cost of closing the largest area of all SWLFs ever requiring a final cover at any time during the active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see section 6.1.5.c.A.(b) of this rule).

3.13.14.a.A.(b) During the active life of the SWLF, the permittee must annually adjust the closure cost estimate for inflation.

3.13.14.a.A.(c) The permittee must increase the closure cost estimate and the amount of financial assurance provided under sections 3.13.14.a.A.(b) and 3.13.14.b of this rule, if changes to the closure plan or SWLF conditions increase the maximum cost of closure at any time during the remaining active life.

3.13.14.a.A.(d) The permittee may reduce the closure cost

estimate and the amount of financial assurance provided under sections 3.13.14.b and 3.13.14.b.A of this rule, if the cost estimate exceeds the maximum cost of closure at any time during the remaining life of the SWLF.

3.13.14.a.A.(d)(A) The permittee must notify the director that the justification for the reduction of the closure cost estimate and the amount of financial assurance has been placed in the operating record.

3.13.14.b. The permittee of each SWLF's operating record must establish financial assurance for closure of the SWLF in compliance with section 3.13 of this rule.

3.13.14.b.A. The permittee must provide continuous coverage for closure until released from financial assurance requirements by demonstrating compliance with section 6 of this rule.

**3.13.15. Financial Assurance for Post-Closure Care.**

3.13.15.a. The permittee must have, at all times, a detailed written estimate, in current dollars, of the cost of hiring a third party to conduct post-closure care for the SWLF in compliance with the post-closure plan developed under section 6.3 of this rule.

3.13.15.a.A The post-closure cost estimate used to demonstrate financial assurance in sections 3.13.15.b and 3.13.15.b.A of this section must account for the total costs of conducting post-closure care, including annual and periodic costs as described in the post-closure plan over the entire post-closure care period. The permittee must notify the director that a copy of the estimate has been placed in the operating record.

3.13.15.a.A.(a) The cost estimate for post-closure care must be based on the most expensive costs of post-closure care during the post-closure care period.

3.13.15.a.A.(b) During the active life of the SWLF and during the post-closure care period, the permittee must annually adjust the post-closure cost estimate for inflation.

3.13.15.a.A.(c) The permittee must increase the post-closure care cost estimate and the amount of financial assurance provided under sections 3.13.15.b and 3.13.15.b.A of this rule, if changes in the post-closure plan or SWLF conditions increase the maximum costs of post-closure care.

3.13.15.a.A.(d) The permittee may reduce the post-closure cost estimate and the amount of financial assurance provided under section 3.13.15.b of this rule, if the cost estimate exceeds the maximum costs of post-closure care remaining over the post-closure care period.

3.13.15.a.A.(d)(A) The permittee must notify the director and receive written approval of the director of the justification for the reduction of the post-closure cost estimate and the amount of financial assurance prior to placing these documents in the operating record.

3.13.15.b. The permittee of each SWLF must establish, in a manner in accordance with section 3.13.15 of this rule, financial assurance for the costs of post-closure care as required under section 6.3 of this rule.

3.13.15.b.A. The permittee must provide continuous coverage for post-closure care until released from financial assurance requirements for post-closure care by demonstrating compliance with section 6.3.7.a of this rule.

**3.13.16. Financial Assurance for Corrective Action.**

3.13.16.a. A permittee of a SWLF required to undertake a corrective action program under section 4.11.7 of this rule must have a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the corrective action in accordance with the program required under section 4.11.7 of this rule.

3.13.16.a.A. The corrective action cost estimate must account for the total costs of corrective action activities as described in the corrective action plan for the entire corrective action period.

3.13.16.a.A.(a) The permittee must notify the director that the estimate has been placed in the operating record.

3.13.16.a.B. The permittee must annually adjust the estimate for inflation until the corrective action program is completed in accordance with section 4.11.7.f of this rule.

3.13.16.a.C. The permittee must increase the corrective action cost estimate and the amount of financial assurance provided under section 3.13.16.b of this rule, if changes in the corrective action program or SWLF conditions increase the maximum costs of corrective action.

3.13.16.a.D. The permittee may reduce the amount of the corrective action cost estimate and the amount of financial assurance provided under section 3.13.16.b of this rule, if the cost estimate exceeds the maximum remaining costs of corrective action.

3.13.16.a.D.(a) The permittee must notify the director that the justification for the reduction of the corrective action cost estimate and the amount of financial assurance has been placed in the operating record.

3.13.16.b. The permittee of each SWLF required to undertake a corrective action program under section 4.11.7 of this rule must establish, in a manner in accordance with section 3.13 of this rule, financial assurance for the most recent corrective action program.

3.13.16.b.A. The permittee must provide continuous coverage for corrective action until released from financial assurance requirements for corrective action by demonstrating compliance with sections 4.11.7.f and 4.11.7.g of this rule.

**3.14. Background Investigation Disclosure Statement.**

#### 3.14.1. Applicability.

Every applicant for a solid waste facility permit must file a background investigation disclosure statement with the director at the time the initial application is filed, unless exempt from such disclosure under the provisions of section 3.14.4 of this rule.

#### 3.14.2. Copies and Fees.

Background investigation disclosure statements must be filed by submitting a notarized original and one (1) certified copy of all papers and other applicable documents, to the director accompanied by a nonrefundable investigation fee in accordance with the schedule of fees in Appendix IV to this rule.

3.14.2.a. Additional certified copies of background investigation disclosure statements, or any portions thereof, must be supplied upon the request of the director.

3.14.2.b. Within sixty (60) days of receipt of a background investigation disclosure statement from a permit applicant, the director must advise the permit applicant if the background investigation disclosure statement is incomplete on its face, and must specify what additional information is required.

#### 3.14.3. Fingerprinting Requirements.

Any applicant required to be listed in the background investigation disclosure statement, must be fingerprinted for identification and investigation purposes in accordance with procedures established by the director.

3.14.3.a. Completed fingerprint cards must be supplied by the applicant with the background investigation disclosure statement, when submitted. The applicant must arrange for the taking of fingerprints.

3.14.3.b. Fingerprints must be taken and verified by an employee of a police agency authorized to take fingerprints.

**Note:** Most local police departments and state police will provide this service. (Some charge a fee).

#### 3.14.4. Exemptions.

The following persons are exempted from the requirement to submit a background investigation disclosure statement:

3.14.4.a. Any person who is an employee of any department, division, agency, commission or authority of the federal, state, county, or municipal government or agency thereof.

3.14.4.b. Any person whose application or permit is solely for a Class E, or Class F facility.

### 3.14.5. Contents of Background Investigation Disclosure Statement.

The background investigation disclosure statement must be filed on forms supplied by the director and must be completed in accordance with W. Va. Code §22-15-5 and include the following:

3.14.5.a. The applicant or any officer, director, or manager, any shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise including ultimate parent corporations, and any other person conducting or managing the affairs of the applicant or the proposed permitted premises;

3.14.5.b. The disclosure statement must contain the full name, business address, home address, date of birth, social security number, a description of the applicant's experience and credentials including any past or present permits for the collection, transportation, treatment, storage or disposal of solid waste or hazardous waste, that are or have been issued to or possessed by the applicant and any person or persons required to be listed by section 3.14.5.a of this rule;

3.14.5.c. A listing of any agencies outside of West Virginia which had, or has regulatory responsibility over the applicant in connection with its collection, transportation, treatment, storage, or disposal of solid waste or hazardous waste;

3.14.5.d. An addendum form must be completed and filed with each disclosure statement for each relation (spouse, sibling, parent or child) engaged in the collection, transportation, treatment, storage or disposal of solid or hazardous waste; and

3.14.5.e. Any other information the director may require that relates to the competency, reliability or good character of the applicant, or as required by section 22-15-5 of the Code.

### 3.14.6. Signature.

3.14.6.a. Background investigation disclosure statements must be signed by each of the following:

3.14.6.a.A. If of a corporation, by its president, its chairman of the board, any other chief executive officer thereof, its secretary and its treasurer.

3.14.6.a.B. If of a partnership, by each of its partners; if of a limited partnership, only by each of its general partners.

3.14.6.a.C. If of any other business concern, by its chief executive officer, its secretary, and its treasurer.

3.14.6.a.D. If of a natural person, by the person him, or herself.

3.14.6.b. All signatures must be signed in ink and dated on original papers. The name and address of the signatory must be typed, stamped, or



legibly printed beneath each signature. All signatures must be notarized.

**3.14.7. Change of Information on Background Investigation Disclosure Statement.**

Where an applicant has an application pending before the director and any of the information required to be included in a background investigation disclosure statement changes, or any additional information must be added after the filing of the statement, the applicant must provide that change of information to the director in writing within thirty (30) days of the change or addition.

**3.14.8. Reporting Requirements.**

Permittees must report to the director within thirty (30) days any changes or additions in the following information required to be included in the background investigation disclosure statement:

**3.14.8.a.** The name of the permittee or applicant;

**3.14.8.b.** The names or identities of any applicant or any officer, director, or manager, thereof, shareholder owning five percent (5) or more of its capital stock, beneficial or otherwise, including ultimate parent corporations, and any other person conducting or managing the affairs of the applicant or the proposed permitted premises;

**3.14.8.c.** The name and business address of any company which collects, transports, treats, stores, or disposes of solid waste or hazardous waste in which the permittee acquires an equity interest:

**3.14.8.d.** A listing and explanation of any notices of violation, orders, or license revocations issued by any state or federal authority:

**3.14.8.d.A.** Any judgement of liability or conviction rendered against the permittee or against any key employee, officer, director, or manager thereof, shareholder owning five percent (5%) or more of its capital stock, beneficial or otherwise, or other person conducting or managing the affairs of the applicant or the proposed permitted premises.

**3.14.8.e.** Changes of information required to be reported pursuant to section 3.14.8.f of this rule may be filed by letter or on copies of applicable portions of background investigation disclosure statement forms. The person filing the report of change must swear to or affirm the truth of the information contained therein.

**3.14.8.f. Filing of Changes of Information.**

Changes of information must be filed by submitting an original and one certified copy to the director.

**3.14.9. Annual Updates.**

The background investigation disclosure statement annual updates must be filed yearly on the anniversary of the permit issuance. It must be filed on

forms supplied by the director and must contain all changes including but not limited to deletions in officers, directors, managers, owners, companies, etc. that have occurred since the submittal of previous application. If there have been any additions to the officers, directors, managers, shareholders owning five percent (5%) or more of capital stock, beneficial or otherwise; general or limited partners; any person performing a function similar to the director; United States parent corporation, including the ultimate parent corporation; agents; or associates of the permittee, a background investigation disclosure statement application must be filed with the division including proper filing fees and fingerprint cards.

**3.14.10. Notarization of Annual Updates.**

Annual updates must be notarized.

**3.14.11. Requirement to File New Background Investigation Disclosure Statement.**

Where an applicant or permittee has submitted multiple amendments to its background investigation disclosure statement, or the information concerning an applicant or permittee has undergone substantial change, or if the background investigation disclosure statement currently on file with the director is more than five (5) years old, the director may require the applicant or permittee to file a new background investigation disclosure statement.

**3.14.12. Additional Information; Duty to Cooperate.**

All applicants and permittees have the continuing duty to provide any assistance or information requested by the director and to cooperate in any inquiry, investigation, or hearing conducted by the director. If, upon issuance of formal request to answer any inquiry or produce information, evidence or testimony, and applicant or permittee refuses to comply, the permit of that person may be denied or revoked by the director.

**3.14.13. Physical Evidence.**

Upon request, the applicant must supply physical evidence, including, but not limited to, photographs or handwriting exemplars of any person listed on the background investigation disclosure statement or any amendment thereof.

**3.14.14. Disqualification Criterion.**

No permit may be approved by the director unless the applicant demonstrates compliance with the provisions of W. Va. Code §22-15-5.

**3.14.15. Cause for Permit Revocation.**

In addition to any other cause set forth elsewhere in this rule, any permit may be revoked for any violation of W. Va. Code §22-15-5.

**3.14.16. Severance of Disqualifying Individuals.** Notwithstanding the disqualification of any applicant or permittee pursuant to these rules, the director may issue or renew a permit if the applicant or permittee severs the

interest of, or affiliation with, the person who would otherwise cause that disqualification.

3.14.16.a. Where the disqualifying individual is the owner of any equity interest or interest in the debt liability of the permittee or applicant, that person must completely divest himself of that interest. Where immediate sale of the interest would work an economic hardship on the individual, the permittee or applicant, at the director's discretion may allow for divestiture over a period of time not to exceed one (1) year.

3.14.16.b. Arrangements such as blind trusts will be acceptable only as part of divestiture arrangement under which the trustee is obliged to sell the disqualifying individual's interest within a period not to exceed two (2) years.

3.14.16.c. Before the director will issue or renew a permit to an applicant or permittee which has severed a disqualifying individual, the applicant or permittee must submit to the director an affidavit, sworn to by the chief executive officer, attesting to the severance of the disqualifying individual, and describing the terms, circumstances, and conditions of that severance. Any instruments pertaining to that severance (such as a trust agreement) must be submitted with the affidavit.

3.14.17. **Confidential Information.** Any information received pursuant to section 3.14 of this rule must be kept confidential by the division to the extent allowable by state law including W. Va. Code §29B-1-1.

3.14.18. **Convicted Persons Generally.** No permittee may knowingly hire as an officer or director any person who has been convicted of any of the offenses enumerated in W. Va. Code §22-15-5(c) without first submitting a background investigation disclosure statement to and obtaining the approval of the director. No permittee shall knowingly allow any person who has been convicted of any of the crimes enumerated in W. Va. Code §22-15-5(c) to acquire an equity interest or debt liability interest without first submitting a background investigation disclosure statement to and obtaining the approval of the director.

3.14.18.a. In connection with any such request, the permittee must file with the director an amended background investigation disclosure statement containing the necessary information about the person, including any evidence the permittee wishes to bring forth demonstrating the person's rehabilitation.

3.14.18.b. The director may consider whether the person has affirmatively demonstrated rehabilitation, and may consider the factors set forth in determining whether to grant permission to the permittee to employ the person or allow him or her to acquire an interest in the permit.

3.14.18.c. Any permittee that violates the provisions of section 3.14 of this rule may be subject to having its permit revoked, notwithstanding the rehabilitation of the individual in question.

3.14.18.d. **Mitigation and Restitution.**

In the case of persons convicted of violating the criminal provisions of any federal or state environmental statute, regulation, or rule, or persons convicted of any crime which involved the violation of such statutes regulations, or rules, the director will not consider such person rehabilitated unless that person has made all reasonable efforts to clean up or mitigate any environmental damage caused by the activities for which he or she was convicted, and to make restitution to any victims injured thereby.

### **3.15. Water Pollution Control Requirements.**

For the purposes of leachate collection and treatment for wastewater and associated facility discharges, the wastewater facility and all appurtenances must meet the permit requirements for such treatment as set out in W. Va. Code §§22-1, 22-11, 22-12 and 22-15 and any rules promulgated thereunder. For the purposes of section 3.15 of this rule only, the requirements in 46 CSR 2, as amended, are hereby incorporated by reference. For landfills a single permit must be issued pursuant to section 3.5.2 of this rule.

### **3.16. Specific Application and Permitting Requirements.**

#### **3.16.1. Requirements for Landfills.**

The applicant must submit all information required by this rule, as applicable, in order for an application to constitute an administratively complete application.

#### **3.16.2. Requirements for Incinerators.**

##### **3.16.2.a. General Requirements.**

The applicant must submit the following information to the director in order to obtain a permit for a resource recovery, industrial, or municipal solid waste incinerator facility: Provided: That the installation, establishment or construction of a new municipal or commercial solid waste facility utilizing incineration technology for the purpose of solid waste incineration is prohibited, per Chapter 22, Article 15, Section 19 of the Code of W. Va., with the single exception of pilot projects.

**3.16.2.a.A.** All information required under sections 3.7.1 through 3.7.12, 3.7.13.a, 3.7.15, 3.7.16, 3.8.9, 3.9, 3.10.1.h, 3.10.1.i, 3.13, 3.14, and 3.15 of this rule;

**3.16.2.a.B.** Detailed drawings of waste storage areas and cleanup areas showing drainage schemes;

**3.16.2.a.C.** Recordkeeping procedures;

**3.16.2.a.D.** A waste management plan describing the handling and storage of the incoming waste and the disposition of the ash and other wastes, alternative disposal options, screening procedures and handling options for screened waste, and cleanup procedures;

**3.16.2.a.E.** Dust control procedures;

3.16.2.a.F. A waste characterization plan;

3.16.2.a.G. A contingency plan indicating firefighting equipment, communication procedures with community agencies, and arrangements for emergency assistance; and

3.16.2.a.H. A start-up schedule.

3.16.2.b. **Required Permits.** At a minimum, two (2) permits will be required for incinerator facilities:

3.16.2.b.A. A permit from the West Virginia Division of Environmental Protection, Office of Air Quality; and

3.16.2.b.B. A solid waste permit for solid waste storage areas and support facilities from the West Virginia Division of Environmental Protection.

3.16.2.c. **Exemptions.**

3.16.2.c.A. Except for those facilities handling special wastes as provided in section 4.13 of this rule, incinerators having a design capacity of five hundred (500) pounds per hour or less are exempt from the permitting requirements of section 3.16 of this rule. However, such an incinerator must be designed and operated to meet the performance standards of section 5 of this rule and with all appropriate regulations or rules of the West Virginia Office of Air Quality.

3.16.2.c.B. Incinerators burning only clean wood waste are exempt from all permitting requirements of section 3.16 of this rule. However, such incinerators must be designed and operated to meet the performance standards of section 5 of this rule and with all appropriate regulations or rules of the West Virginia Office of Air Quality;

3.16.3. **Requirements for Transfer Stations.**

3.16.3.a. **General Requirements.** The applicant must submit the following information to the director in order to obtain a permit for a transfer station:

3.16.3.a.A. All information required under sections 3.7.1 through 3.7.12, and sections 3.7.15, 3.7.16, 3.8.1, 3.8.9, 3.9, 3.13, 3.14, and 3.15 of this rule;

3.16.3.a.B. A description of the solid waste storage or loading areas;

3.16.3.a.C. A description of the areas of land for which a bond will be posted;

3.16.3.a.D. The location and use of buildings and related facilities which will be used in the operation; and

3.16.3.a.E. The location of scales and weigh stations to be used

in the operation.

**3.16.3.b. Operations Plan.** An application to conduct transfer station activities must include an operations plan that includes the following:

**3.16.3.b.A.** A narrative description of the general operating plan for the proposed facility including:

**3.16.3.b.A.(a)** The origin, composition, and weight or volume of solid waste that is proposed to be received at the facility;

**3.16.3.b.A.(b)** The proposed operating and receiving hours for the facility;

**3.16.3.b.A.(c)** The process to be used at the facility;

**3.16.3.b.A.(d)** The daily operational methodology of the proposed process;

**3.16.3.b.A.(e)** The loading rate;

**3.16.3.b.A.(f)** The proposed capacity of the facility; and

**3.16.3.b.A.(g)** The expected life of the facility.

**3.16.3.b.B.** A plan for an alternative waste handling or disposal system during periods when the proposed facility is not in operation, including procedures to be followed in case of equipment breakdown (e.g., the use of standby equipment, extension of operating hours, and contractual agreements for diversion of municipal waste to other facilities); and

**3.16.3.b.C.** A plan for training equipment operators and other personnel in the design and operation of the facility.

**3.16.3.c. Plan for Access Roads.**

An application to conduct transfer station activities must contain designs, cross-sections, and specifications for access roads, including load limits, in accordance with section 4.5.3 of this rule.

**3.16.3.d. Stormwater, Soil Erosion, and Sedimentation Control Plan.**

An application to conduct transfer station activities must include a plan to manage surface storm water soil erosion and sedimentation control during the various phases of construction and operation on the permit area. Calculations indicating water quantities must be based on the 25-year, 24-hour storm event. The plan must include fully dimensioned diversion ditches and indicate length, gradient, and cross-section for configuration by reach and capacities for ditch volume by reach. Calculations which are necessary to support design and siting must be included in the plan.

**3.16.3.e. Groundwater Monitoring Plan.**

If required by the director, the applicant must submit a groundwater monitoring plan to detect contamination, degradation or pollution of groundwater from the facility.

**3.16.3.f. Soil Monitoring Plan.**

If required by the director, the applicant must submit a soil monitoring plan, capable of detecting soil contamination from the facility.

**3.16.3.g. Nuisance Control Plan.**

An application to conduct transfer station activities must contain a plan to prevent hazards or nuisances from vectors, odors, noise, dust, and other nuisances not otherwise provided for in the permit application. The plan must provide for the routine assessment of vector infestation and must also provide for counter measures. The plan may include a control program involving a contractual arrangement for services with an exterminator.

**3.16.3.h. Litter Control Plan.**

An application to conduct transfer station activities must contain a plan to control litter.

**3.16.3.i. Contingency Plan.**

An application to conduct transfer station activities must contain a contingency plan relating to emergency procedures, hazard prevention, emergency equipment, and the implementation of the contingency plan.

**3.16.4. Requirements for Recycling Facilities.**

**3.16.4.a. Applicability.**

Recycling facilities whose only function is to accept at no charge, buy or transfer source separated recyclable material for reuse, resale or transfer for further processing are exempt from this rule. All other recycling facilities must provide notice and obtain a permit in accordance with the provisions of section 3.16.4 of this rule. Provided, That mixed waste recovery facilities, sludge processing facilities, and composting facilities are not considered recycling facilities nor considered to be reusing or recycling solid waste within the meaning of §22-15-2 "Recycling facility."

**3.16.4.a.A. Recycling facilities existing on the effective date of this rule are considered to have a valid permit from the division if the requirements of section 3.16.4.b. of this rule is met.**

**3.16.4.a.B. Recycling facilities which are developed after the effective date of this rule are considered to have a valid permit from the division upon fulfilling the requirements of sections 3.16.4.b and 3.16.4.c of this rule.**

**3.16.4.b. Notification of Activity.**

**3.16.4.b.A. Existing Qualifying Recycling Facilities.**



Any existing recycling facility which qualifies for a permit under section 3.16.4.a of this rule must notify the director of its existence within ninety (90) days of the effective date of this rule.

**3.16.4.b.B. New Qualifying Recycling Facilities.**

Any new recycling facility which qualifies for a permit under section 3.16.4.a of this rule must notify the director of its existence prior to installation, establishment, construction, modification, or operation of the recycling facility.

**3.16.4.b.C. Form of Notification.**

Notification required by section 3.16.4.b of this rule must be made to the director on forms and in the manner prescribed by the director.

**3.16.4.c. Recycling Facility Requirements.**

Except as provided under section 3.16.4.d of this rule, all persons owning or operating a recycling facility must:

**3.16.4.c.A.** Comply with the applicable prohibitions and location standards listed under section 3.1 of this rule;

**3.16.4.c.B.** Provide rapidly growing trees, shrubbery, fencing, berms, or other appropriate means at the facility to provide a wind break, screening from the surrounding area and to function as a barrier to discourage unauthorized access;

**3.16.4.c.C.** Post a sign in conformance with section 4.6.1.a.M of this rule;

**3.16.4.c.D.** Construct and maintain adequate shelter and sanitary facilities for all personnel;

**3.16.4.c.E.** Construct and maintain adequate drainage systems to prevent free-standing storm water;

**3.16.4.c.F.** Ensure that all leachate, waste water, and storm water is collected, treated and/or discharged in a manner that does not violate the water quality standards established under §22-11 or the regulations and rules promulgated thereunder;

**3.16.4.c.G.** All operations must be conducted within enclosed structure(s);

**3.16.4.c.H.** Receiving or storing of any hazardous waste material at a recycling facility is strictly prohibited;

**3.16.4.c.I.** Storage of recyclable materials outside of the enclosed structure must only be materials in bundles, bins or containers; or materials prepared for transportation;

**3.16.4.c.J.** All materials not used in the recycling process must

be properly disposed of;

3.16.4.c.K. No material may be stored for more than sixty (60) days without written approval by the director;

3.16.4.c.L. All materials received by the facility must be accurately weighed or otherwise measured in accordance with the provisions of Title 110, Series 6A, sections 4.2 and 4.3 of the CSR.

**3.16.4.d. Other Recycling Exemptions.**

The following recycling activities are not required to obtain a solid waste permit pursuant to this rule:

3.16.4.d.A. Nonprofit organizations accepting source-separated materials; and

3.16.4.d.B. Returnable container redemption centers operated by a dealer or distributor.

3.16.4.e. Resource Recovery Permitting Requirements. (Reserved)

3.16.4.f. Other Recycling Requirements. (Reserved)

**3.16.5. Requirements for Construction/Demolition Landfills.**

**3.16.5.a. General Requirements.**

All construction/demolition landfills must apply for and receive approval from the director prior to operation unless otherwise specified by section 3.16.5 of this rule. Notwithstanding the provisions of section 3.16.5 of this rule, a Class D solid waste facility which qualifies as a commercial solid waste facility pursuant to W. Va. Code §22-15 is required to meet all appropriate landfill requirements specified by this rule.

3.16.5.b. Exemptions. The disposal of trees, stumps, woodchips, and yard waste generated from land clearing when generation and disposal occurs on the same property is exempt from the requirements of this rule. A landowner using construction/demolition waste material to improve the grade of the land if the area of that land does not exceed one-half acre is exempt from the requirements of these regulations, provided that the landowner does not fill natural wetlands, adheres to best management practices for construction and maintains cover over the material. The construction/demolition waste material exemption for landowners does not apply to multiple one-half acre sites on the same parcel of land.

3.16.5.c. Class D-1 Solid Waste Facilities. A Class D-1 solid waste/facility permit must be obtained for the disposal of construction/demolition waste in cases where a noncommercial Class D solid waste facility general permit specified by section 3.16.5.d is not applicable.

3.16.5.c.A. Except as provided in sections 3.16.5.c.A.(a) through 3.16.5.c.A.(d) of this rule, an applicant for a Class D-1 solid waste facility permit must meet all of the requirements in section 3 of this rule.

3.16.5.c.A.(a). In lieu of the test corings required in section 3.8.3 of this rule, available literature and field reconnaissance may be used to obtain the information required in section 3.8.3 of this rule.

3.16.5.c.A.(b) A minimum of one (1) downgradient monitoring well must be drilled to intersect the uppermost significant aquifer. If the permit area is between five (5) to ten (10) acres, a minimum of two (2) downgradient monitoring wells must be drilled. If the permit area is greater than ten (10) acres, a minimum of three (3) monitoring wells must be drilled.

3.16.5.c.A.(c) Class D-1 solid waste facilities are exempted from the requirements of section 3.8.4.d.A, 3.8.3.a.C.(d), and 3.8.3.a.C.(i) of these this rule.

3.16.5.c.A.(d) Upon written request, the director may exempt a Class D-1 solid waste facility from compliance with a specific requirement in section 3 of this rule that the director deems to be inappropriate or may modify such requirement for that particular facility.

#### 3.16.5.d. Class D General Permit.

##### 3.16.5.d.A. Coverage.

The director may issue a general permit to regulate noncommercial construction/demolition solid waste facilities except those covered by individual Class D permits.

##### 3.16.5.d.B. Administration.

General permits may be modified, revoked, reissued or suspended in accordance with the applicable requirements of section 3.18 of this series.

3.16.5.d.B.(a) The director may require any person authorized by a general permit to apply for an individual permit. Any interested person may petition the director to take action under this subparagraph. Cases where an individual permit may be required include the following:

3.16.5.d.B.(a)(A) The permittee is not in compliance with the conditions of the general permit;

3.16.5.d.B.(a)(B) A change has occurred in the availability of the best management practices or demonstrated technology for the control or abatement of problems applicable to the facility;

3.16.5.d.B.(a)(C) Specific regulations are promulgated for solid waste facilities covered by the general permit.

3.16.5.d.B.(b) The director may require any owner or operator authorized by a general permit to apply for an individual permit as provided in paragraph 3.16.5.d.B.(a) of this section, only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of reasons for this decision, an application form, a statement setting a time for the owner or operator to file the application, and a statement that on the effective date of the individual

permit, the general permit as it applies to the individual permittee shall automatically terminate. The director may grant additional time upon request of the applicant.

3.16.5.d.B.(c) Any owner or operator authorized by a general permit may request to be excluded from the coverage of a general permit by applying for an individual permit. The owner or operator shall submit an application under section 3.5 with reasons supporting the request, to the director, no later than ninety (90) days after the general permit notice in accordance with section 3.21.

3.16.5.d.B.(d) Upon issuance of a general permit, the director shall cause to be published a notice of issuance as a Class I legal advertisement in a qualified daily or weekly newspaper and by any other means reasonably calculated to give notice of issuance to the persons affected by it.

### 3.17. Draft Permit.

3.17.1. Once an application is complete, the director must tentatively decide whether to prepare a draft permit or to deny the application.

3.17.1.a. If the director tentatively decides to issue a general permit, he or she shall prepare a draft general permit that shall contain the following information:

3.17.1.a.A. All conditions under sections 3.5 and 3.6 and subsection 5.4.3;

3.17.1.a.B. Permit application requirements;

3.17.1.a.C. All compliance schedules;

3.17.1.a.D. All limitations, standards, prohibitions and conditions, and all variances that are to be included.

3.17.2. If the director decides to prepare a draft permit, a draft permit must be prepared that contains the following information:

3.17.2.a. All conditions required under section 3 and other applicable sections of this rule.

3.17.2.b. All compliance schedules; and

3.17.2.c. Standards for treatment, storage, and disposal and other permit conditions under section 4 and/or 5 of this rule.

3.17.3. A fact sheet will be prepared by the director for every draft permit for each solid waste facility or activity and for every general permit. The fact sheet must briefly set forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The director will send this fact sheet to the applicant and, upon request, to any other person.

3.17.4. The fact sheet must include, when applicable:

3.17.4.a. A brief description of the type of facility or activity which is the subject of the draft permit.

3.17.4.b. The type and quantity of wastes which are proposed to be or are being recycled, treated, stored, or disposed of, injected, emitted, or discharged. A description of the type of wastes must include, but not be limited to, the characteristics of the waste materials and the potential effects upon public health and the environment.

3.17.4.c. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions.

3.17.4.d. A rationale explaining why any requested variances or alternatives to required standards do or do not appear justified.

3.17.4.e. A description of the procedures for reaching a final decision on the draft permit including:

3.17.4.e.A. The beginning and ending dates of the comment period and the address where comments will be received;

3.17.4.e.B. The procedures for requesting a hearing and the nature of that hearing; and

3.17.4.e.C. Any other procedures by which the public may participate in the final decision.

3.17.4.f. The name and telephone number of a person to contact for additional information.

### 3.18. Permit Modification, Reissuance, Suspension, and Revocation.

#### 3.18.1. Actions by the Director.

3.18.1.a. Permits may be modified, revoked, reissued, suspended, or revoked by the director for the reasons specified in section 3.18 of this rule.

3.18.1.a.A. When a permit is modified, only the conditions subject to modification are reopened. All other conditions of the permit will remain in effect for the duration of the permit.

3.18.1.a.B. The director may require additional information and, in the case of a major modification, may require submission of a new permit application.

3.18.1.b. If the director tentatively decides to modify a permit, the director will prepare a modified draft permit and will follow the public notice procedures in section 3.21 of this rule. The director may request additional information or require the submission of an updated permit application from the applicant.

**3.18.2. Causes for Modification or Permittee-Requested Reissuance of Permits.**

**3.18.2.a. Minor Modification.**

Permits may be modified by the director at any time except for major modifications as listed in section 3.18.2.b of this rule. Minor modification does not require the preparation of a draft permit or the completion of the public notice procedures.

**3.18.2.a.A.** A minor modification may be approved by the director for a permittee proposing to increase the volume of solid waste accepted at the facility by an amount of ten percent (10%) or less upon application in alternate years, unless such an increase requires a change in the classification of the facility.

**3.18.2.b. Major Modifications.** The following are causes for major modification, but not reissuance, of a permit unless the permittee so requests or agrees. These causes require the preparation of a draft permit and public notice and the opportunity for a public hearing as required by this rule unless an emergency is declared by the director.

**3.18.2.b.A.** The areal limits of the waste disposal unit will be increased over the permitted disposal area;

**3.18.2.b.B.** The performance, efficiency, or longevity of the liner system or the final cover (cap) will be decreased;

**3.18.2.b.C.** The efficiency or performance of the leachate management system will be decreased;

**3.18.2.b.D.** The efficiency or performance of a gas management system will be decreased;

**3.18.2.b.E.** The performance or operation of the surface water control system will be negatively affected;

**3.18.2.b.F.** A decrease in the quality or quantity of data from any environmental monitoring system will occur;

**3.18.2.b.G.** A change in the design or configuration of the regraded area will occur;

**3.18.2.b.H.** The amount or type of post-closure financial assurance will change;

**3.18.2.b.I.** The permitted disposal area boundary will be significantly changed;

**3.18.2.b.J.** The post-closure land use of the property will change;

**3.18.2.b.K.** A remedial action to protect groundwater is

necessary;

3.18.2.b.L. The permit is to be transferred to a new permittee;

3.18.2.b.M. Operating authorization is being sought to place into service a structure constructed pursuant to a construction Q.A./Q.C. program; or

3.18.2.b.N. Other similar modifications as determined by the director.

**3.18.3. Permit Suspension or Revocation.**

3.18.3.a. **Suspension.** A solid waste facility permit may be suspended by order of the director for any of the following reasons:

3.18.3.a.A. Violation of the Act, this rule or any order of the director issued thereunder;

3.18.3.a.B. Interference with a representative of the director in the performance of the director's duties;

3.18.3.a.C. Failure to adhere to the terms and conditions of the permit or any order issued by the director under this rule the Act; or

3.18.3.a.D. Discovery of failure in the application or during the permit issuance process to fully disclose all significant facts or the permittee's misrepresentation of any significant fact at any time.

3.18.3.b. **Revocation.** A solid waste facility permit may be revoked by order of the director for any of the following reasons:

3.18.3.b.A. Any deficiency at the solid waste facility constituting an imminent pollution, health, or safety hazard;

3.18.3.b.B. Persistent violation of this rule, permit terms and conditions, or orders issued by the director under the Act or this rule;

3.18.3.b.C. Discovery of failure in the application or during the permit issuance process to fully disclose all significant facts or the permittee's misrepresentation of any significant fact at any time; or

3.18.3.b.D. Any cause which would require disqualification pursuant to this rule from receiving a permit upon original application.

**3.18.3.c. Effect of Permit Suspension or Revocation.**

3.18.3.c.A. **Suspension.** All solid waste processing, recycling, or disposal activities and the receipt of any solid waste at the solid waste facility must cease immediately upon receipt of an order of suspension. Activities at the facility may recommence only after expiration of the order of suspension or upon revocation of that order by the issuing authority.

3.18.3.c.B. **Revocation.** All solid waste processing, recycling,



or disposal activities and the receipt of any solid waste at the solid waste facility must cease immediately upon receipt of an order of revocation. The solid waste facility owner must submit either an application for a permit to close the facility or an application for new solid waste facility permit within the time specified in the order of revocation.

**3.18.3.c.C. Environmental Monitoring and Control.** Environmental monitoring and control activities specified in an order of suspension or in an order of revocation must continue at the solid waste facility for the duration of such order or until the authority who issued that order approves the cessation of such activities.

**3.19. Transfer of Permit.**

**3.19.1. Transfer Requirements** A permit issued by the director in accordance with the provisions of this rule may be transferred to another person. The person seeking to succeed to the rights granted by the permit must:

**3.19.1.a.** File a completed application with the director on forms and in a manner prescribed by the director, including background investigation disclosure statements as required by section 3.14 of this rule;

**3.19.1.b.** Provide performance bond coverage at least equal to that of the original permit in accordance with section 3.13 of this rule. It must be affirmatively demonstrated to the director that a bond in the full amount of that required for the permit will be kept in full force and effect before, during, and after the transfer of the permit rights;

**3.19.1.c.** Provide for public notice in accordance with section 3.21 of this rule; and

**3.19.1.d.** Obtain the director's approval for the transfer of permit in writing.

**3.19.2. Denial of Transfer.** The director may refuse to transfer any permit and require that a new application for a solid waste facility permit be submitted prior to any transfer of permit responsibility or rights. Such refusal must be made in writing giving reasons therefor.

**3.19.3. Operator Assignment.** A permittee who wishes to assign the operation of the solid waste facility through an agreement, contract, or other legal instrument, to another party but retain the permit must request prior written approval on forms prescribed by the director. Such party must complete background investigation disclosure statement(s) as required under section 3.14 of this rule.

**3.20. Permit Renewal.**

**3.20.1. Application for Permit Renewal.** An application for the renewal of a valid permit that proposes no major modification to the permit must be on forms prescribed by the director and must contain the following:

3.20.1.a. The name and address of the permittee, location of the permit area including the county, and the permit number;

3.20.1.b. A statement that the terms and conditions of the permit are being satisfactorily met;

3.20.1.c. A statement that the operation is in compliance with the applicable environmental protection standards of the Act and all applicable rules and regulations;

3.20.1.d. A statement that the performance bond or other financial assurance for the operation will continue in effect.

3.20.1.e. A progress map of the same size and scale as the proposal map;

3.20.1.f. A certification that the information set forth in the form and progress map is true, accurate, and complete; and

3.20.1.g. A notarized signature of the principal officer of the permittee in accordance with section 3.7.18 of this rule.

3.20.2. **Public Notice.** An applicant seeking to renew a valid permit who does not propose any major modification to that permit must meet the public notice requirements of section 3.21 of this rule. The division will receive comments only upon the contents of the application for renewal. A public hearing may be held at the discretion of the director.

3.20.3. **Modification and Renewal.** If an application is received which proposes a major modification to the existing permit and the renewal of that permit, it will be treated as a major modification pursuant to section 3.18.2.b of this rule in addition to the requirements of section 3.20 of this rule.

### 3.21. **Public Notice.**

#### 3.21.1. **Scope.**

3.21.1.a. Public notice must be given whenever either of the following actions have occurred:

3.21.1.a.A. A draft permit has been prepared; or

3.21.1.a.B. A hearing has been scheduled under section 3.23 of this rule.

#### 3.21.2. **Timing.**

3.21.2.a. Public notice of the preparation of a draft permit must allow at least thirty (30) days for public comment. Upon request of the permittee, the public comment period will be extended for an additional thirty (30) days. Further extension of the comment period may be granted by the director for good cause shown but in no case may the further extension exceed an additional thirty (30) days.

3.21.2.b. Public notice of a public hearing must be given at least thirty (30) days before the hearing. Public notice of the hearing may be given at the same time as public notice of the draft permit and the two (2) notices may be combined.

3.21.2.c. A notice required under section 3.21 of this rule may be combined with that notice required under W. Va. Code §22-11.

3.21.3. **Methods.** Public notice must be given by the following methods:

3.21.3.a. By mailing a copy of a notice to those persons whose names are included on a mailing list maintained by the division.

3.21.3.b. By the director publishing the public notice as a Class II legal advertisement in a qualified newspaper, as defined in W. Va. Code §59-3-1, serving the county, or counties where the facility will be located. The director may also require that legal advertisement be placed in newspapers of adjacent counties. The cost of the publication will be borne by the applicant who must send a certification of publication to the division within twenty (20) days after publication.

3.21.3.c. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

3.21.4. **Contents.**

3.21.4.a. **Public Notice Contents.** All public notices issued under section 3.21 of this rule must contain the following information:

3.21.4.a.A. The name and address of the office processing the permit action for which notice is being given;

3.21.4.a.B. The name and address of the permittee or permit applicant, and if different, of the facility or activity regulated by the permit, except in the case of general permits;

3.21.4.a.C. A brief description of the business conducted at the facility or activity described in the permit application or in the draft permit, when there is no application;

3.21.4.a.D. The name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit and the application;

3.21.4.a.E. A brief description of the comment procedures required by section 3.21.2 of this rule and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision;

3.21.4.a.F. A general description of the location of the proposed permit area including streams;

3.21.4.a.G. A clear and accurate location map. A map of a scale and detail found in the West Virginia General Highway Map will be the minimum standard for acceptance. The map size must be at a minimum two inches by two inches (2" x 2"). Longitude and latitude lines and a north arrow must be shown on the map and such lines will cross at or near the center of the proposed permit area; and

3.21.4.a.H. A description of the activities covered in the application, including the class of the solid waste facility, the types, amounts, and origins of solid wastes to be handled, site improvements, and solid waste handling methods.

3.21.4.b. **Other Public Notice Information.** In addition to the contents required under section 3.21.4.a of this rule, public notices for hearings must contain the following information:

3.21.4.b.A. A reference to the date of previous public notices relating to the permit;

3.21.4.b.B. The date, time, and place of the hearing; and

3.21.4.b.C. A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

**3.22. Public Comments and Requests for Public Hearings.**

3.22.1. During the public comment period provided under section 3.21.2 of this rule, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised in the hearing. All comments must be considered in making the final decision and must be answered as provided in section 3.27 of this rule.

**3.23. Public Hearings.**

3.23.1. The director will hold a public hearing in the vicinity of the proposed facility whenever the director finds, on the basis of requests, a significant degree of public interest on issues relevant to the draft permit. The director also may hold a public hearing at his or her discretion whenever such a hearing might clarify one or more issues involved in the permit decision.

3.23.2. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing will automatically be extended to ten (10) days after the close of any public hearings under section 3.23 of this rule.

3.23.3. A tape recording or written transcript of the hearing will be made available to the public, upon request.

**3.24. Reopening of the Public Comment Period.**

3.24.1. If any data, information, or arguments submitted during the public comment period raise substantial new questions concerning a permit, or if as a result of comments submitted by someone other than the permittee, or the director determines to revise any condition of the permit that had been sent to initial public notice, the director must take one or more of the following actions:

3.24.1.a. Prepare a new draft permit.

3.24.1.b. Reopen or extend the public comment period to give interested persons an opportunity to comment on the information or arguments submitted.

3.24.4.c. Conduct a public hearing.

3.24.2. Comments filed during the reopened comment period will be limited to the substantial new questions that caused its reopening. The public notice must define the scope of the reopening.

3.25. **Public Participation File.** The applicant for a permit for a solid waste facility, major modification, or closure must maintain a public participation file. The file must contain all written comments received during the public comment period, copies or tapes of transcripts of all meetings held by the applicant in response to any public comment, and a copy of the applicant's written response to all written comment letters received during the public comment period. These response letters must clearly address each point in each comment letter including any actions taken by the applicant to address the comment. The response letters must be sent by certified mail and the signed return receipts must also be included in the public participation file. The complete public participation file must be submitted to the director by the applicant, within thirty (30) days of the end of the public comment period designed in the public notice. The director must approve the public participation file prior to permit issuance.

3.26. **Public Availability of Information.** Public availability of information relating to facility permits shall be governed by the provisions of W. Va. Code §29B.

3.27. **Issuance and Effective Date of Permit.**

3.27.1. After the close of the public comment period on a draft permit, the director must issue a final permit decision. The director must provide written notification of the decision to the applicant and to each person requesting notice of the final permit decision. For the purposes of section 3.27 of this rule, a "final permit decision" means the final decision of the director to issue, deny, modify, suspend, revoke, reissue, or terminate a permit.

3.27.2. If the final permit decision is to deny, suspend, revoke, modify, or terminate a permit, the director must provide the reasons therefor in the director's written notification to the applicant. This notification will also include reference to the procedures for appealing the final permit decision.

3.27.3. A final permit decision becomes effective not less than thirty (30) days after the date of notice of the decision, unless an earlier date is requested by the applicant and agreed upon by the director.

### 3.28. Permit Review by the Director.

3.28.1. The director may refuse to grant a permit in accordance with the provisions of W. Va. Code §22-15-5(c). Written notification of such a refusal, and the reasons therefor, will be provided to the applicant.

3.28.2. Within thirty (30) days of receipt of a permit application, compliance schedule, closure plan, or major modification application, the director will determine whether such application, schedule, or plan is complete (i.e., in proper order for technical review to commence) and will notify the applicant of the determination in writing. If the director determines that such application, schedule, or plan is not complete, the notification will advise the applicant of the deficiencies that require remedy.

3.29. Appeals. Appeal of permit decisions must be conducted in accordance with the provisions of W. Va. Code §22-15-16.

### §47-38-4. Landfill Performance Standards.

#### 4.1. Enforcement of Landfill Performance Standards.

Enforcement of the performance standards in section 4 of this rule must be conducted in accordance with the provisions of W. Va. Code §22-15-1 et sec.

4.2. Solid Waste Assessment Fees. Permittees are required under the provisions of W. Va. Code §22-15-11 and 110 CSR 6A of the W. Va. Department of Tax and Revenue to pay solid waste assessment fees.

#### 4.3. Landfill Manager Training and Certification.

4.3.1. Qualifications. Operation of every commercial solid waste disposal facility "landfill," must be conducted under the direction of an individual who has authority and knowledge to make and implement decisions regarding operating conditions at the facility (called in this subsection an "individual in responsible charge") and who has attended and successfully completed a course of instruction in solid waste management procedures and practices. Such course of instruction must be approved in writing by the director.

4.3.2. Applicability. Individuals in responsible charge of existing or new landfills and new individuals in responsible charge of existing landfills must attend and successfully complete a course of instruction within twelve (12) months from the effective date of this rule.

4.3.3. Instruction Course Criteria. An approved course of instruction must include at a minimum, the role of sanitary landfills in integrated solid waste management, basics of site selection, complying with design requirements, waste acceptance and screening, leachate management, landfill gas management, landfill operational techniques, environmental/operational and

permit compliance inspections, field exercise and homework assignment, landfill economics, closure and post-closure care, state/federal regulations, permitting requirements and a written examination sanctioned by an internationally recognized certification organization or an accredited college or university program.

**4.3.4. Certificate Requirement.** Successful completion of an approved course of instruction by an individual in responsible charge must include passing the written examination and the award of a certificate as a certified manager; and

**4.3.4.a.** The individual must demonstrate that he or she has remained current in the field of solid waste management by attending at least thirty (30) contact hours of continuing education every three years and providing proof thereof upon request.

**4.4. Operating Record.**

Every facility must develop and maintain, on site, or at an alternative location approved by the director an operating record that contains the information listed in this section as it becomes available. Existing facilities must develop such a manual within ninety (90) days of the effective date of this rule, unless granted a written extension of preparation time by the director. New facilities must have a record in place on the first day of business operations. The record must include a table of contents which outlines, by section title and page number, the discussion required by this rule.

**4.4.1. General Information.**

The items listed in this section may be waived if those items are included in the facility permit, renewals, modifications and other similar permit documents or application thereto, provided that the permit and/or application must be kept in the operating record file including:

**4.4.1.a.** The facility title;

**4.4.1.b.** The engineering consultants;

**4.4.1.c.** The name and address of the facility owner and the name of the facility operator, the permit holder or permittee;

**4.4.1.d.** The location of the facility by latitude and longitude and county;

**4.4.1.e.** The proposed area of waste fill;

**4.4.1.f.** The anticipated life of the facility and its disposal capacity;

**4.4.1.g.** The waste contributors, including all municipalities and major commercial and industrial customers;

**4.4.1.h.** The waste type and quantity and origin to be disposed; and



4.4.1.i. Any exemptions requested from the Division.

**4.4.2. Monitoring.**

The record must include a description of required groundwater, surface water, gas, unsaturated zone, and leachate monitoring programs developed in accordance with the approved Q.A./Q.C. plan and the provisions of section 4.4 of this rule, including:

**4.4.3. Operations.**

The record must describe the daily operations of the facility including a discussion of the following items:

- 4.4.3.a. The timetable for the phases of facility development;
- 4.4.3.b. The waste types accepted or excluded;
- 4.4.3.c. Typical waste handling techniques, and methods for handling unusual waste types;
- 4.4.3.d. Procedures for excluding the receipt of hazardous waste;
- 4.4.3.e. The hours of operation;
- 4.4.3.f. Traffic routing;
- 4.4.3.g. Drainage and erosion controls;
- 4.4.3.h. Windy, wet, and cold weather disposal operations;
- 4.4.3.i. Fire protection equipment;
- 4.4.3.j. Anticipated staffing requirements;
- 4.4.3.k. Methods for disease vector, dust, and odor control;
- 4.4.3.l. Daily clean-up;
- 4.4.3.m. Direction of filling;
- 4.4.3.n. Salvaging;
- 4.4.3.o. Recordkeeping and reporting requirements as follows:
  - 4.4.3.o.A. The permittee must record, retain and maintain copies of the documents listed in this section in the facility operating record, and all information contained in the operating record must be furnished upon request to the director or be made available at all reasonable times for inspection by the director. Those documents include, but are not limited to the following:
    - 4.4.3.o.A.(a) Any location standard demonstrations required by sections 3.1 and 3.2 of this rule;

4.4.3.o.A.(b) A listing of any inspection records, training procedures, and notification procedures required by section 4.6.1.a.F of this rule;

4.4.3.o.A.(c) Gas Monitoring results from monitoring and any remediation plans developed in accordance with section 4.10 of this rule;

4.4.3.o.A.(d) Design documentation for the placement of leachate or gas condensate in the SWLF as required by section 4.13.3 of this rule;

4.4.3.o.A.(e) Any demonstration, certification, finding, monitoring, testing, or analytical data required by section 4.11 of this rule;

4.4.3.o.A.(f) Any closure and post-closure care plans and any monitoring, testing or analytical data as required by sections 4.11 and/or 6 of this rule.

4.4.3.o.A.(g) Any cost estimates and financial assurance documentation required by sections 3.7.10 and 3.13 of this rule,

4.4.3.o.A.(h) Any other demonstration, certification, finding, monitoring, testing, or analytical data required by this rule;

#### 4.4.3.o.B. Alternative Recordkeeping.

4.4.3.o.B.(a) The director can set alternative schedules for recordkeeping and notification requirements as specified in sections 4.4.3 and 4.5.4., except for the notification requirements in sections 3.2.7.b and 4.11.3.g.A.

4.4.3.p. Parking for visitors, users, and employees;

4.4.3.q. A listing of the backup equipment available; and

4.4.3.r. A listing of local emergency response personnel.

#### 4.4.4. Design.

A general discussion of the design of the major engineering features, such as base grade configuration and relationships to subsurface conditions, anticipated waste types and characteristics, phases of development, traffic routing, liner design, facility monitoring, final capping, closure, long-term post-closure care and other similar design features.

#### 4.4.5. Appendix.

An appendix must be included which lists the references used and includes any additional data not previously presented, supplemental design calculations, material specifications, operating agreements such as draft leachate treatment agreements or signed soil borrow agreements, documents related to long-term post-closure care funding, and other appropriate information.

#### 4.5. Minimum Design Criteria for Landfills.

##### 4.5.1. Design Capacity.

The minimum design capacity of a landfill must equal or exceed the expected volume of solid waste and daily and intermediate cover that will be disposed of at the facility within ten (10) years after operations begin. Expansions of existing facilities are not subject to the ten-year minimum design capacity requirement.

##### 4.5.2. Drainage and Sediment Control Plan.

###### 4.5.2.a. Stream Channel Diversions.

###### 4.5.2.a.A. Design Capacity.

4.5.2.a.A.(a) The design capacity of channels for temporary and permanent channel diversions must be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream of the diversion.

4.5.2.a.A.(b) The temporary and permanent channel diversions must be designed so that the combination of channel, bank, and floodplain configuration is adequate to pass safely the peak runoff of a 10-year, 24-hour storm for a temporary channel diversion and a 100-year, 24-hour storm for a permanent channel diversion.

###### 4.5.2.a.B. Removal of Temporary Diversions.

Temporary channel diversions must be removed when they are no longer needed to achieve the purpose for which they were approved as long as downstream facilities which were being protected are modified or removed.

4.5.2.a.C. Stream Channel Specifications. The drainage and sediment control plan must contain the following plans, design data, and specifications concerning stream channels:

4.5.2.a.C.(a) A "stream channel design computation sheet" to be completed for each proposed temporary or permanent stream channel diversion;

4.5.2.a.C.(b) Construction plans showing:

4.5.2.a.C.(b)(A) A plan view of the area showing centerline profiles of existing stream channel and proposed location of the temporary or permanent stream channel (drawn to scale);

4.5.2.a.C.(b)(B) Profiles along the centerline of the existing and temporary or permanent stream channel showing original ground, proposed and existing stream bottom (drawn to scale);

4.5.2.a.C.(b)(C) A cross-section showing original ground limits, bottom width, side slopes, depth of flow, floodplain configuration; and

4.5.2.a.C.(b)(D) A detailed sequence of the installation of temporary or permanent stream channel diversions;

4.5.2.a.C.(c) Construction specifications; and

4.5.2.a.C.(d) Maintenance schedule and procedures for maintenance.

**4.5.2.b. Diversions.**

**4.5.2.b.A. Run-on Control System.**

4.5.2.b.A.(a) Permittees of all SWLFs must design, construct, operate, and maintain:

4.5.2.b.A.(b) A run-on control system capable of preventing flow onto any part of the disposal area including the active portion of the SWLF during peak discharge from at least a 25-year, 24-hour storm.

**4.5.2.b.B. Design Capacity.**

Diversions must have the capacity to pass safely the peak discharge from the contributing watersheds from a 25-year, 24-hour storm.

**4.5.2.b.C. Diversion Specifications.**

The drainage and sediment control plan must contain the following plans, design data, and specifications concerning diversions:

4.5.2.b.C.(a) A "Diversion Design Computation Sheet" must be completed for each proposed diversion;

**4.5.2.b.C.(b) Construction plans showing:**

4.5.2.b.C.(b)(A) A profile based upon survey along the centerline of the diversion showing original ground line and proposed diversion bottom;

4.5.2.b.C.(b)(B) A channel cross-section showing the original ground line, bottom width, side slopes, depth of flow, freeboard, and other pertinent information drawn to scale;

4.5.2.b.C.(b)(C) The type of soil in which the diversion will be excavated. Either the soil must be sampled and classified at intervals of five hundred (500) feet or a demonstration of erosion potential based on existing soils information must be made; and

4.5.2.b.C.(b)(D) The type and design of the outlet proposed for each diversion;

4.5.2.b.C.(c) Maintenance schedule and procedures for maintenance; and

4.5.2.b.C.(d) Construction and vegetation specifications.

#### 4.5.2.c. Sediment Control.

Sediment control structures must be constructed in appropriate locations in order to control sedimentation. All runoff from the disturbed area must pass through a sedimentation pond or ponds. All sediment control structures must be designed, constructed, and maintained in accordance with the specifications contained in the U.S. Soil Conservation Service's "Erosion and Sediment Control Handbook for Developing Areas in West Virginia" unless the director approves the use of an equivalent handbook of guidance, or as otherwise specified in this rule.

##### 4.5.2.c.A. Design and Construction Requirements.

4.5.2.c.A.(a) All sediment control structures must be designed, constructed and certified prior to the commencement of any earthmoving or grading activities in upgradient areas which may contribute runoff to such control structures. Any change to the approved control structures made during construction must be indicated on "as-built" plans showing the approved design, the changes made, and surveyed reference points. All "as-built" plans must be submitted to the director.

4.5.2.c.A.(b) All sediment control structures must be located as near as possible to the disturbed area. All sediment control structures must be located out of perennial streams unless otherwise approved by the director.

4.5.2.c.A.(c) All sediment control structures must have a sediment capacity of 0.125 acre-feet for each acre of disturbed area in the structure's watershed. In addition to the sediment capacity, the sediment control structure must have the detention capacity to store a 2-year, 24-hour frequency storm. The water stored from this storm must be released through a nonclogging dewatering device that allows the stored volume of water to be evacuated within a 7-day to 8-day period. The elevation of the nonclogging dewatering device must not be lower than the maximum elevation of the designed sediment storage volume. and also satisfy the storm water provisions of the Federal Clean Water Act, as reflected in §22-11 of the Code of W. Va. and any rules promulgated thereunder.

4.5.2.c.A.(d) All discharges from sediment control structures must not cause a violation of state and federal water quality standards and must meet all effluent limitations as reflected in §22-11 of the Code of W. Va. and any rules promulgated thereunder.

4.5.2.c.A.(e) All sediment control structures must be designed, constructed, and maintained to prevent short-circuiting.

4.5.2.c.A.(f) All sediment control structures must be cleaned out when the sediment accumulation reaches sixty percent (60%) of the design sediment capacity. The clean-out elevation must be indicated on the plans submitted for the structure. Sediment removal and disposal must be done in a manner that minimizes adverse effects on surface water and groundwater quality.

4.5.2.c.A.(g) All sediment control structures must be

designed, constructed, and maintained to meet the following safety standards:

4.5.2.c.A.(g)(A) An adequate structural foundation must be provided for all structures through the clearing of trees and brush and the exclusion of organic material. Earthen materials used in the construction must be free of trees, roots, brush, frozen soil, organic materials, coal processing materials, construction waste, and other debris. All earthen materials must be properly compacted to prevent excessive settlement.

4.5.2.c.A.(g)(B) Sediment control structures must provide a combination of principal and emergency spillways that will safely discharge a minimum 25-year, 24-hour storm without overtopping of the structure. There must be no outflow through the emergency spillway during the passage of a 10-year, 24-hour frequency storm through the sediment control structure. All spillways must discharge an adequate distance beyond the downstream toe of the structure to a natural drainway to prevent erosion of the downstream toe.

4.5.2.c.A.(g)(C) The contributing drainage area(s) for a sediment control structure must not exceed 200 acres.

4.5.2.c.A.(g)(D) The minimum diameter of the principal spillway and the discharge conduit must be twelve (12) inches.

4.5.2.c.A.(g)(E) A minimum difference in elevation of one and one-half (1.5) feet between the top of the principal spillway and the bottom of the invert of the emergency spillway must be provided. A minimum difference in elevation of one (1) foot of freeboard between the maximum design flow elevation in the emergency spillway and the top of the settled embankment must be provided.

4.5.2.c.A.(g)(F) The vertical distance between the lowest point along the centerline of the sediment control structure and the top (crest) of the sediment control structure must not exceed twenty-five (25) feet.

4.5.2.c.A.(g)(G) Appropriate barriers must be provided to control seepage along the conduits that extend through the embankment.

4.5.2.c.A.(g)(H) All inspection reports and engineering certifications must be provided to the director.

4.5.2.c.A.(g)(I) The sediment control structure must possess a minimum embankment width of ten (10) feet.

4.5.2.c.A.(g)(J) The embankment must be designed and constructed with a minimum static safety factor of 1.5.

4.5.2.c.A.(g)(K) The embankment must be stabilized and revegetated upon construction.

4.5.2.c.A.(h) Sediment control structures must be inspected and closed in accordance with section 6 of this rule.

4.5.2.c.A.(i) Any sediment control structure that is an

artificial barrier or obstruction, including any works appurtenant to it and any reservoir created by it, which is or will be placed, constructed, enlarged, altered or repaired so that does or will impound or divert water and:

**4.5.2.c.A. (i) (A)** Is or will be twenty-five (25) feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifteen (15) acre-feet or more of water; or

**4.5.2.c.A. (i) (B)** Is or will be six (6) feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier and which does or can impound fifty (50) acre-feet or more of water; or is, by definition, a "dam" as defined in W. Va. Code §22-14 is subject to regulation under the provisions of W. Va. Code, §22-14-1 et seq.

**4.5.2.c.A. (j) Discharge Structures.**

Discharge from temporary or permanent sediment control structures, diversions, or stream channel diversions must be controlled by energy dissipaters, riprap channels or other devices approved by the director to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures must be designed in accordance with standard engineering procedures.

**4.5.2.c.B. Abandonment Procedures.** Minimum requirements for abandoning sediment control structures prior to total release of a bond are as follows:

**4.5.2.c.B. (a) Excavated Sediment Pond (Dugout Type).**

There is no required abandonment procedure for excavated ponds unless they have an embankment. If they have an embankment, they must follow the abandonment procedures outlined in section 4.5.2.c.B. (b) of this rule.

**4.5.2.c.B. (b) Embankment-Type Sediment Control Structures; Embankment-Type Excavated Sediment Control Structures; Crib and Gabion Control Structures.**

Sediment control structures and all accumulated sediment above the structure must be removed from the natural drainway if they are built across it. Sediment control structures adjacent to natural drainways must be abandoned by diverting the entrance channel to the natural drainways providing that vegetation has been established on-site, thus preventing any future surface runoff from entering the abandoned sediment control structure. When sediment control structures are removed, the natural drainway must be returned to its original profile and cross-section as near as practical. An original profile and cross-section view for the channel must be submitted with the drainage plan. The channel sides and bottom must be rock riprap. The riprap must extend up to the top of the channel. The riprap requirement may be waived where the bottom and sides of the channel consist of bedrock. Provisions must be made to control sediments during removal of the sediment control structure and any necessary stream channel work.



**4.5.2.c.B. (c) Revegetation of Disturbed Areas.** All areas disturbed during abandonment of a sediment control structure must be seeded and mulched immediately to revegetate and stabilize the disturbed areas.

**4.5.2.d. Run-off Control System.**

**4.5.2.d.A.** All permittees must design, construct, operate, and maintain a run-off control system capable of flow collections and controlling from any portion of the landfill to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

**4.5.2.d.B.** Run-off from all portions of the landfill, including the active portion must be handled in accordance with Chapter 22, Article 15 of the Code of W. Va.

**4.5.3. Access Roads.**

**4.5.3.a. Access Road Construction Plans.**

Construction plans for an access road (i.e., a road used for facility access or for the haulage of solid waste to the facility) must contain the following:

**4.5.3.a.A.** A plan view drawn to scale showing the station baseline, the location of each culvert with the drainage flow direction, the location of each intermittent or perennial stream with its flow direction, and other data pertinent to the construction of the access road.

**4.5.3.a.B.** A profile based upon survey drawn to scale (the scale should be no greater than 1 inch = 100 feet horizontal and 1 inch = 50 feet vertical) showing the road surface, the location and size of culverts, station elevations, original ground, and percent grades.

**4.5.3.a.C.** A cross-section of the access road showing culverts and their slopes, fill materials, original ground, ditches, and sediment control devices.

**4.5.3.a.D.** A structure computation sheet and a cross-section showing all data pertinent to the crossing of each intermittent or perennial stream.

**4.5.3.a.E.** Construction specifications -- covering excavation, selection and placement of materials, vegetative protection against erosion, road surfacing, drainage, and sediment control -- that incorporate the design criteria set forth in section 4.5.3.b of this rule.

**4.5.3.a.E. (a)** All grades referred to in section 4.5.3.b of this rule must be subject to a tolerance of two percent (2%). All linear measurements referred to in section 4.5.3.b of this rule must be measured from the horizontal and must be subject to a tolerance of five percent (5%).

**4.5.3.a.E. (b)** All primary access roads for the facility, including those leading to the active area, must be designed for all-weather operation in accordance with standards of the West Virginia Division of

Highways.

**4.5.3.b. Access Road Construction.**

**4.5.3.b.A. Grades.**

The grading of an access road must be such that:

**4.5.3.b.A. (a)** The overall grade must not exceed ten percent (10%).

**4.5.3.b.A. (b)** The maximum pitch grade must not exceed fifteen percent (15%) for three hundred (300) feet in each one thousand (1,000) feet of road construction. The intersection of the access road with an existing highway must be designed to provide sufficient sight distance and minimum interference with traffic on the highway.

**4.5.3.b.A. (c)** The surface must pitch toward the ditchline at a minimum rate of one-half ( $\frac{1}{2}$ ) inch per foot of surface width or crowned at the minimum rate of one-half ( $\frac{1}{2}$ ) inch per foot of surface width as measured from the centerline of the access road.

**4.5.3.b.B. Curves.**

The grade on switchback curves must be reduced to less than the approach grade and must not be greater than ten percent (10%);

**4.5.3.b.C. Cut Slopes.**

Cut slopes must not be steeper than 1:1 in soils or 1:4 in rock.

**4.5.3.b.D. Drainage Ditches.**

A ditch must be provided on both sides of a throughout and on the inside shoulder of a cutfill section, with ditch relief culverts being spaced according to grade. Water must be intercepted or directed around and away from a switchback. All ditchlines must be capable of passing the peak discharge of a 10-year, 24-hour storm. Where superelevation to the inside of a curve will improve the safety of the access road, such as in the head of a hollow, a ditchline may be located on the outside shoulder of the cutfill section provided that the ditchline is designed so that it will remain stable and that drainage control in accordance with the Act is also provided for water on the outside of the curve.

**4.5.3.b.E. Drainage Culverts.**

Ditch relief culverts must be installed wherever necessary to ensure proper drainage of surface water beneath or through the access road.

**4.5.3.b.E. (a)** Culverts must be installed in accordance with the following spacings:

**4.5.3.b.E. (a) (A)** For a road grade of zero to five percent (0% to 5%), the spacing must be three hundred to eight hundred (300 to 800).

feet;

4.5.3.b.E.(a)(B) For a road grade of five to ten percent (5 to 10%), the spacing must be two hundred to three hundred (200 to 300) feet; and

4.5.3.b.E.(a)(C) For a road grade of ten to fifteen percent (10 to 15%), the spacing must be one hundred to two hundred (100 to 200) feet.

4.5.3.b.E.(b) Culverts must cross the access road at a thirty (30) degree angle downgrade with a minimum grade of three percent (3%) from inlet to outlet, except in the conveyance of intermittent or perennial streams where the pipe must be straight and coincide with the normal flow.

4.5.3.b.E.(c) The inlet end of each culvert must be protected by a headwall of stable material as approved by the director and the slope at the outlet end must be protected with an apron of rock riprap, energy dissipater, or other material approved by the director.

4.5.3.b.E.(d) Culverts must be covered by compacted fill to a minimum depth of one (1) foot or one-half ( $\frac{1}{2}$ ) of the culvert inside diameter, whichever is greater.

4.5.3.b.E.(e) Alternative culvert designs may be submitted to the director for approval in cases where the design criteria in section 4.5.3.b.E of this rule is deemed to be impractical.

#### 4.5.3.b.F. Culvert Openings.

Culvert openings installed on an access road must not be less than one hundred (100) square inches in area, but, in any event, all culvert openings must be of adequate capacity to carry the peak discharge capacity of a 1-year, 24-hour storm from the contributing watershed and must receive necessary maintenance to function properly at all times.

#### 4.5.3.b.G. Intermittent or Perennial Stream Crossing.

Culverts, bridges, or other drainage structures must be used to cross intermittent or perennial streams. Consideration must be given to such factors as weather conditions, season of the year, and time period for construction with regard to using measures to minimize adverse effects to the water quality and stream channel. In no event may the sediment load of the stream be significantly increased or the water quality be significantly decreased during the construction period. Water control structures must be designed with a discharge capacity capable of passing the peak runoff of a 10-year, 24-hour storm from the contributing watersheds. If approved by the director, the capacity of the water control structure itself can be at least equal to or greater than the stream channel discharge capacity immediately upstream and downstream of the crossing provided the structure can pass at least a 1-year, 24-hour storm.

#### 4.5.3.b.H. Sediment Control.

A sediment storage volume must be provided equal to 0.125 acre-feet for each

acre of disturbed area and the storm water provisions of the Federal Clean Water Act, as reflected in 22-11 of the Code of W. Va. and any rules promulgated thereunder. A lesser value may be approved by the director. Temporary erosion and sedimentation control measures must be implemented during construction until permanent sedimentation control can be established.

#### **4.5.3.b.I. Revegetation of Slopes.**

All disturbed area including fill and cut slopes, must be revegetated by the use of seed and mulch immediately, unless approved by the director, after the construction of an access road and that revegetation must be maintained thereafter as necessary to control or prevent erosion.

#### **4.5.3.b.J. Surfacing.**

An access road must not be surfaced with any acid-producing or toxic materials and the surface must be maintained in a manner that controls or prevents erosion and siltation.

#### **4.5.3.c. Removal of Drainage Structures.**

Bridges, culverts, and stream crossings necessary to provide access to the facility must not be removed until reclamation is completed and approved by the director. The same precautions as to water quality are to be taken during removal of drainage structures as those taken during construction and use.

#### **4.5.3.d. Existing Access Roads.**

Where existing roads are to be used for access or haulage, the requirements of sections 4.5.3.b.A through 4.5.3.b.E of this rule may be waived by the director if it can be demonstrated that reconstruction to meet the requirements of section 4.5.3 of this rule would result in greater environmental harm than is produced by existing conditions and that the drainage requirements in section 4.5.3.b of this rule can otherwise be met.

#### **4.5.3.e. Infrequently Used Access Roads.**

Access roads constructed for and used only to provide infrequent service to facilities such as monitoring devices may be exempted by the director from compliance with the requirements of sections 4.5.3.b.A, 4.5.3.b.H, and 4.5.3.b.I of this rule.

#### **4.5.3.f. Dust Control.**

All reasonable means must be employed to control dust from the surface of access roads, including those statutes, rules and regulations of the W. Va. Office of Air Quality.

#### **4.5.3.g. Abandonment of Access Roads.**

Access roads must be abandoned in accordance with the following:

**4.5.3.g.A.** Every effort must be made when an access road is abandoned to prevent erosion by the use of culverts, water bars, or other

devices. Water bars or earth berms must be installed in accordance with the following spacings;

4.5.3.g.A.(a) For a grade of zero to five percent (0% to 5%), the spacing must be three hundred to eight hundred (300 to 800) feet;

4.5.3.g.A.(b) For a grade of five to ten percent (5 to 10%), the spacing must be two hundred to three hundred (200 to 300) feet; and

4.5.3.g.A.(c) For a grade of ten to fifteen percent (10 to 15%), the spacing must be one hundred to two hundred (100 to 200) feet.

4.5.3.g.B. The land covered by an access road must be revegetated by the use of seed and mulch immediately, unless approved by the director, after the abandonment of the road in accordance with section 4.5.6 of this rule.

#### 4.5.4. Liners.

4.5.4.a. Liner System Requirements. A person who receives a permit for a landfill after the effective date of this rule -- including a permit that results in an expansion of a currently permitted landfill -- must design, construct, operate, and maintain a liner system at that landfill. Nothing within this rule may be construed to allow the installation of any liner system on areas not lined as of the effective date of this rule, that is not in conformance with section 4.5.4.a.C or 4.5.4.a.E of this rule. Landfills that do have an Article 15 permit and a liner installed as of that date may install a liner as approved by the director in accordance with the following:

4.5.4.a.A. A landfill for which a valid closure permit has been issued pursuant to W. Va. Code §22-15-10 may remain in operation after the date of this rule, provided that -- the facility is in conformance with its permit and this rule, and such landfill has in place:

4.5.4.a.A.(a) Groundwater monitoring wells in conformance with the requirements of section 3.8.4 of this rule;

4.5.4.a.A.(b) A groundwater monitoring program in conformance with the requirements of section 4.11 of this rule;

4.5.4.a.A.(c) An effective leachate treatment capability; and

4.5.4.a.A.(d) Sediment run-off control.

4.5.4.a.B. All new SWLFs and lateral expansions that meets all of the requirements enumerated in sections 4.5.4.a.A and 4.5.4.a.B of this rule, may remain in operation provided that: the liner must meet the following criteria:

4.5.4.a.B.(a) The liner must be constructed, installed and maintained in accordance with a design approved by the director.

4.5.4.a.B.(b) The design must ensure that the concentration values listed in Appendix III to this rule will not be exceeded in the

uppermost aquifer at the relevant point of compliance, as specified by the director under section 4.5.4.a.G, or;

4.5.4.a.B.(c) With a composite liner, as defined in section 2 and a leachate collection system that is designed and constructed to maintain less than a 30-cm depth of leachate over the liner.

4.5.4.a.C. A liner system must consist of the following elements:

4.5.4.a.C.(a) Subbase, which is the prepared layer of soil or earthen materials upon which the remainder of the liner system is constructed;

4.5.4.a.C.(b) Leachate detection zone, which consists of a perforated piping system within a layer of soil or earthen material placed on top of the subbase and upon which the composite liner is placed;

4.5.4.a.C.(c) Composite liner, which consists of two (2) components; the compacted clay component topped with the synthetic liner; and

4.5.4.a.C.(d) Leachate collection and protective cover zone which is a leachate collection system within a prepared layer of soil or earthen material placed over the composite liner.

4.5.4.a.D. Active areas of existing landfills which have installed liners, leachate collection systems, and groundwater monitoring programs, as of the effective date of this rule, may petition the director to allow use of an alternative liner system, if:

4.5.4.a.D.(a) A demonstration is made to the director that an alternative design will provide the same degree of protection of the groundwater resources as the liner system described in section 4.5.4.a.E of this rule. The demonstration must include a series of groundwater monitoring well sampling analyses and also the direction-of-migration and rate-of-flow studies showing that there are no existing or potential groundwater pollution problems; and

4.5.4.a.D.(b) A bond or other applicable means of financial assurance is posted in compliance with sections 3.7.10 and 3.13.

4.5.4.a.E. In order to allow for the development of new technology, applicants may petition the director to allow installation of an alternative liner system upon a demonstration to the director that the alternative system will be equally or more protective of the groundwater resources than the liner system described in section 4.5.4 of this rule.

4.5.4.a.F. **Alternative Liner Design.** Any permittee who wishes to utilize an alternative liner design must submit a design to the director that complies with section 4.5.4 of this rule, and must address the following factors:

4.5.4.a.F.(a) The hydrogeologic characteristics of the facility and surrounding land;

4.5.4.a.F.(b) The climatic factors of the area; and

4.5.4.a.F.(c) The volume and physical and chemical characteristics of the leachate.

**4.5.4.a.G. Relative Point of Compliance.**

4.5.4.a.G.(a) The relevant point of compliance specified by the director must be no more than 150 meters (492 feet) from the waste management unit boundary and must be located on land owned by the owner of the SWLF.

4.5.4.a.G.(b) In determining the relevant point of compliance, the director must consider at least the following factors:

4.5.4.a.G.(b)(A) The hydrogeologic characteristics of the facility and surrounding land;

4.5.4.a.G.(b)(B) The volume and physical and chemical characteristics of the leachate;

4.5.4.a.G.(b)(C) The quantity, quality, and direction, of flow of groundwater;

4.5.4.a.G.(b)(D) The proximity and withdrawal rate of the groundwater users;

4.5.4.a.G.(b)(E) The availability of alternative drinking water supplies;

4.5.4.a.G.(b)(F) The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater and whether groundwater is currently, or reasonably expected to be used, for drinking water;

4.5.4.a.G.(b)(G) Public health, safety, and welfare effects; and

4.5.4.a.G.(b)(H) Practicable capability of the permittee.

**4.5.4.b. Liner System Limitations.**

4.5.4.b.A. No person may construct a liner system for a facility unless there is at least four (4) feet maintained between the bottom of the subbase of the liner system and the seasonal high groundwater table.

4.5.4.b.A.(a) The location of The seasonal high groundwater table may be inferred by such indicators as soil mottling, soil gleying and iron and manganese concentrations.

4.5.4.b.A.(b) Drainage systems may be utilized to maintain a four (4) foot isolation distance between the bottom of the subbase of the liner system and the seasonal high groundwater table. The drainage system must be limited to drain tile, piping, and french drains.

4.5.4.b.B. No person may construct a liner system for a facility



unless at least eight (8) feet can be maintained between the bottom of the subbase of the liner system and the permanent groundwater table.

4.5.4.b.C. A minimum of four (4) feet vertical separation must be maintained between the bottom of the subbase of the liner system and bedrock unless otherwise approved by the director. If backfilled material is used, the nature of these materials is subject to approval by the director.

4.5.4.b.D. If the approved design plans provide for the placement of additional adjacent liner, waste may not be placed within fifteen (15) feet of an edge of the liner that will be joined by an additional adjacent liner. The edge must be protected by soil cover or other method approved in the permit until additional liner is added.

4.5.4.b.E. If the approved design plans do not provide for the placement of additional adjacent liner, waste must not be placed within five (5) feet of an edge of the liner.

4.5.4.b.F. A liner berm at least four (4) feet high must be constructed and maintained along the edge of the liner to prevent the lateral escape of leachate.

4.5.4.b.G. The edge of the liner must be clearly marked.

4.5.4.b.H. The operator must comply with additional requirements the director deems necessary to protect public health, safety, and the environment.

#### 4.5.4.c. Liner System Subbase.

4.5.4.c.A. The subbase portion of a liner system must:

4.5.4.c.A.(a) Be at least six (6) inches thick and compacted to a Standard Proctor density of at least ninety-five percent (95%) at three to five percent (3% to 5%) wet of optimum;

4.5.4.c.A.(b) Have a minimum bearing capacity of two and one-quarter tons per square foot plus one-half of the total applied load in pounds per square foot;

4.5.4.c.A.(c) Be no more permeable than  $1 \times 10^{-6}$  cm/sec based on laboratory and field testing;

4.5.4.c.A.(d) Be hard, uniform, smooth, and free of debris, rock, plant materials, and other foreign material; and

4.5.4.c.A.(e) Have a slope of at least two percent (2%).

4.5.4.c.A.(f) The subbase construction certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of any material over the subbase.

#### 4.5.4.d. Liner System Leachate Detection Zone.

4.5.4.d.A. The leachate detection zone must:

4.5.4.d.A.(a) Create a flow zone between the subbase and the composite liner more permeable than  $1 \times 10^{-3}$  cm/sec based on laboratory and field testing. The leachate detection zone including piping system must be designed and placed on a minimum slope of two percent (2%);

4.5.4.d.A.(b) Be at least twelve (12) inches thick;

4.5.4.d.A.(c) Be comprised of clean soil or earthen materials that contain no debris, plant material, or material with sharp edges;

4.5.4.d.A.(d) Have geotextile material placed within the leachate detection zone in such a manner as to prevent clogging of the piping system. The geotextile material must not be placed directly against pipes; and

4.5.4.d.A.(e) Contain a perforated piping system capable of detecting and intercepting liquid within the leachate detection zone and conveying the liquid to central collection points, as follows:

4.5.4.d.A.(e)(A) The slope, size, and spacing of the piping system must assure that liquids drain efficiently from the leachate detection zone;

4.5.4.d.A.(e)(B) The distance between pipes in the piping system must not exceed one hundred (100) feet on center unless otherwise approved by the director;

4.5.4.d.A.(e)(C) The pipes must be installed nearly perpendicular to the slope with continuous positive slope;

4.5.4.d.A.(e)(D) The minimum diameter of the perforated pipe must be four (4) inches with a wall thickness of Schedule 40 or greater;

4.5.4.d.A.(e)(E) The pipe must be capable of supporting anticipated loads without failure based upon facility design;

4.5.4.d.A.(e)(F) Rounded stones or aggregates must be placed around all portions of the pipes of the piping system. The stones or aggregates must be sized to prevent clogging of the pipes and damage to the subbase and the composite liner;

4.5.4.d.A.(e)(G) The piping system must be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers must be located along the perimeter of the leachate collection piping system. The number and spacing of the manholes or cleanout risers must be sufficient to ensure proper maintenance of the piping system by water jet flushing or an equivalent method;

4.5.4.d.A.(e)(H) The leachate detection system must be cleaned and maintained as necessary; and

4.5.4.d.A.(e)(I) The leachate detection zone construction

certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of the composite liner.

**4.5.4.e. Liner System Composite Liner.**

The composite liner must be comprised of the following components, unless otherwise approved in writing by the director:

**4.5.4.e.A. The compacted clay component must:**

**4.5.4.e.A.(a)** Be a minimum compacted thickness of two (2) feet;

**4.5.4.e.A.(b)** Be compacted in six (6) inch lifts;

**4.5.4.e.A.(c)** Be no more permeable than  $1 \times 10^{-7}$  cm/sec based on laboratory and field testing;

**4.5.4.e.A.(d)** Be free of particles greater than two (2) inches in any dimension, and must also be free of debris, rock, plant materials, and other foreign materials;

**4.5.4.e.A.(e)** Be placed without damaging the subbase and leachate detection zone;

**4.5.4.e.A.(f)** Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted clay nor the subbase are frozen;

**4.5.4.e.A.(g)** Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface; and

**4.5.4.e.A.(h)** Be designed, operated, and maintained so that the physical and chemical characteristics of the liner and liner's ability to restrict the flow of solid waste, solid waste constituents, or leachate is not adversely affected by the leachate.

**4.5.4.e.A.(i)** The director may approve the substitution of three (3) feet of compacted soil for the required two (2) feet of compacted clay if equivalency of groundwater protection can be proven.

**4.5.4.e.B. The synthetic component must:**

**4.5.4.e.B.(a)** Be no more permeable than  $1 \times 10^{-7}$  cm/sec;

**4.5.4.e.B.(b)** Have a minimum thickness of sixty (60) mils;

**4.5.4.e.B.(c)** Be installed in accordance with manufacturer's specifications under the supervision of an authorized representative of the manufacturer;

**4.5.4.e.B.(d)** Be inspected for uniformity, damage, and imperfections during construction or installation;

4.5.4.e.B.(e) Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface;

4.5.4.e.B.(f) Be designed to withstand the calculated tensile forces acting upon the synthetic materials when installed on slopes greater than twenty-five percent (25%);

4.5.4.e.B.(g) Have field seams oriented parallel to the line of the maximum slope and not across the slope. In corners and irregularly-shaped portions, the number of field seams must be minimized. No horizontal seam may be less than five (5) feet from the toe of slope;

4.5.4.e.B.(h) Have the seam area free of moisture, dust, dirt, debris, and foreign material of any kind before seaming. Field seaming is prohibited, unless otherwise approved by the director when the ambient air temperature is below five degrees centigrade (5 degrees C), above forty degrees centigrade (40 degrees C), during precipitation or when winds are in excess of twenty (20) miles per hour;

4.5.4.e.B.(i) Be anchored a minimum of twenty-four (24) inches horizontally back from the edge of the top of the slope. The liner must be anchored by cutting a trench twelve (12) to sixteen (16) inches in depth, laying the liner across the soil perimeter of the trench, backfilling the trench, and compacting the backfill material; and

4.5.4.e.B.(j) Be installed under the direction of a field crew foreman or other person approved in writing by the director with documented successful liner installation experience.

4.5.4.e.C. The certification of the construction of the composite liner compacted clay component and a Q.A./Q.C. report must be submitted to the director prior to the placement of the composite liner synthetic component.

4.5.4.e.D. The composite liner synthetic component construction certification and the Q.A./Q.C. report must be submitted to the director prior to the placement of the leachate collection and protective cover zone.

**4.5.4.f. Liner System Leachate Collection and Protective Cover Zone.**

4.5.4.f.A. The leachate collection and protective cover zone must:

4.5.4.f.A.(a) Create a flow zone between the composite liner and solid waste more permeable than  $1 \times 10^{-3}$  cm/sec based upon both laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the composite liner;

4.5.4.f.A.(b) Be at least eighteen (18) inches thick;

4.5.4.f.A.(c) Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the composite liner does not exceed one (1) foot at the expected flow capacity from the drainage area except

during storm events;

4.5.4.f.A.(d) Be comprised of clean soil or earthen materials that contain no debris, plant materials, rocks, or other solid materials larger than one-quarter (1/4) inch in diameter and no material with sharp edges;

4.5.4.f.A.(e) Be graded, uniformly compacted, and smoothed;

4.5.4.f.A.(f) Be installed in a manner that prevents damage to the composite liner;

4.5.4.f.A.(g) Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system must also meet the following:

4.5.4.f.A.(g)(A) The slope, sizing and spacing of the piping system must ensure that liquids drain efficiently from the leachate collection zone;

4.5.4.f.A.(g)(B) The distance between pipes in the piping system must not exceed one hundred (100) feet on center unless otherwise approved by the director;

4.5.4.f.A.(g)(C) The pipes must be installed nearly perpendicular to the slope with continuous positive slope;

4.5.4.f.A.(g)(D) The minimum diameter of the perforated pipe must be four (4) inches with a wall thickness of Schedule 40 or greater;

4.5.4.f.A.(g)(E) The pipe must be capable of supporting anticipated loads without failure based upon facility design;

4.5.4.f.A.(g)(F) Rounded stones or aggregates must be placed around all portions of the pipes of the piping system. The stones or aggregates must be sized to prevent clogging of the pipes and damage to the composite liner;

4.5.4.f.A.(g)(G) The piping system must be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes and cleanout risers must be located along the perimeter of the leachate detection piping system. The number and spacing of the manholes and cleanout risers must be sufficient to ensure proper maintenance of the piping system by water jet flushing or an equivalent method;

4.5.4.f.A.(g)(H) The leachate collection system must be cleaned and maintained as necessary; and

4.5.4.f.A.(g)(I) Have geotextile material placed within the leachate collection system in such a manner as to prevent clogging of the piping system. The geotextile material must not be placed directly against pipes.

4.5.4.f.B. The leachate collection zone construction certification and the Q.A./Q.C. report must be submitted to the director prior to the placement of solid waste.

**4.5.4.g. Liner System Engineer Certification.**

4.5.4.g.A. The liner system must be inspected during, and at the end of the construction by a registered professional engineer.

4.5.4.g.B. Upon completion of construction of each major element or stage of the liner system, including the subbase, leachate detection zone, composite liner, leachate collection zone and protective cover (and prior to the deposition of waste), the engineer must certify to the director under seal that the element or stage was constructed as approved in the permit.

**4.5.4.h. Liner System Initial Placement of Solid Waste.**

The first eight (8) feet of solid waste placed on the protective cover must not contain material capable of penetrating or puncturing the protective cover.

**4.5.5. Quality Assurance and Quality Control.** The quality control measures and tests required by the Q.A./Q.C. plan under section 4.5.5 of this rule must be employed to ensure that the engineering design and performance standards are achieved.

4.5.5.a. The Q.A./Q.C. inspector will inspect those aspects of the subbase and subgrade preparation including, but not limited to, the following:

**4.5.5.a.A. Subgrade Preparation.**

4.5.5.a.A.(a) Site preparation, including clearing, and grubbing;

4.5.5.a.A.(b) Excavation and contouring of the subgrade to required elevations;

**4.5.5.a.B. Subbase Preparation.**

4.5.5.a.B.(a) Compaction of subbase to design density at proper moisture content to achieve required strength and stability to support the liner;

4.5.5.a.B.(b) Moisture content density and field strength tests performed as required;

4.5.5.a.B.(c) Compacted lift thickness;

4.5.5.a.B.(d) Compaction equipment weight, speed, and number of passes;

4.5.5.a.B.(e) Method of moisture addition;

4.5.5.a.B.(f) Proof rolling of subbase; and

4.5.5.a.B.(g) Fine finishing of the subbase for acceptability of areas to be lined.

4.5.5.b. The Q.A./Q.C. inspector must inspect those aspects of the liner system including, but not limited to, the following:

4.5.5.b.A. Liner material to ensure that the materials being used meet specifications;

4.5.5.b.B. Liner material stockpiling, storage, and handling in a manner that prevents damage;

4.5.5.b.C. Inspections of locations where inlet/outlet structures that penetrate the liner to ensure the compatibility of those structures with respect to the liner;

4.5.5.b.D. Final grades of the liner to ensure that they are within acceptable tolerance;

4.5.5.b.E. Final inspection of the liner for acceptability prior to placement of the protective cover material;

4.5.5.b.F. Installation of the compacted clay component of the liner with respect to the following:

4.5.5.b.F.(a) Compaction of the liner to design density at the proper moisture content to achieve the required hydraulic conductivity and the maintenance of the design strength and stability;

4.5.5.b.F.(b) Uniformity of compaction;

4.5.5.b.F.(c) Compacted lift thickness;

4.5.5.b.F.(d) Compacted liner thickness;

4.5.5.b.F.(e) Compaction equipment weight, speed, and number of passes;

4.5.5.b.F.(f) Moisture content, density, hydraulic conductivity, and field infiltration tests to ensure that they are performed as required; and

4.5.5.b.F.(g) Repairs and corrective or remedial action performed as required;

4.5.5.b.G. Synthetic liner component with respect to the following:

4.5.5.b.G.(a) Liner panel placement is in accordance with required configuration;

4.5.5.b.G.(b) Permanent and temporary anchoring procedures are followed;



4.5.5.b.G.(c) Overlap and seam width are in accordance with the design;

4.5.5.b.G.(d) The area of seaming is clean and supported;

4.5.5.b.G.(e) The uniformity and continuity of seams and welds;

4.5.5.b.G.(f) Cap strips are installed on all seams, as applicable;

4.5.5.b.G.(g) Qualitative and quantitative field seaming tests are performed as required for imperfections in seams, wrinkles, and fishmouths and that all imperfections are repaired as required; and

4.5.5.b.G.(h) Corrective or remedial action taken;

4.5.5.b.H. The Q.A./Q.C. inspector must inspect those aspects of the leachate detection, and leachate collection and protective cover systems including, but not limited to, the following:

4.5.5.b.H.(a) Material stockpiling, storage, and handling to prevent damage;

4.5.5.b.H.(b) Drainage layer placement;

4.5.5.b.H.(c) Thickness of the leachate detection, leachate collection and protective cover zones;

4.5.5.b.H.(d) Grain size analyses, relative density and compaction tests are performed as required;

4.5.5.b.H.(e) Uniformity of the soil;

4.5.5.b.H.(f) Grades and alignments are within acceptable tolerance;

4.5.5.b.H.(g) Placement of stone or aggregate around all portions of the pipes in the piping systems;

4.5.5.b.H.(h) Proper implementation of actions to protect the piping system and the other components of the liner system from the loads and stresses due to the traffic of backfilling and other equipment; and

4.5.5.b.H.(i) Proper placement of the geotextile materials within the leachate detection zone and within the leachate collection and protective cover zone.

4.5.5.b.I. Daily Q.A./Q.C. reports must be prepared by the Q.A./Q.C. inspectors and maintained in a bound log book which must be available at the job site at all times for inspection by the director. All lab reports and field testing results must be signed and dated by the inspector, and must be attached to the log book reports. Each daily log book report must include, but not be limited to, the following:

4.5.5.b.I.(a) Identification of project name, location, and date;

4.5.5.b.I.(b) Weather conditions prevalent during construction and installation including:

4.5.5.b.I.(b)(A) Temperature (daily high and low);

4.5.5.b.I.(b)(B) Barometric pressure (high and low);

4.5.5.b.I.(b)(C) Wind direction and maximum speed;

4.5.5.b.I.(b)(D) Time of each precipitation event; and

4.5.5.b.I.(b)(E) Total amount of each precipitation event;

4.5.5.b.I.(c) Description and location of construction currently underway;

4.5.5.b.I.(d) A listing of all equipment and personnel at work at each unit;

4.5.5.b.I.(e) Description and location of areas being tested or observed;

4.5.5.b.I.(f) Off-site material received and quality verification documentation;

4.5.5.b.I.(g) Calibration of test equipment;

4.5.5.b.I.(h) Description and location of remedial action taken; and

4.5.5.b.I.(i) Decisions and comments including conversations, directives, and directions for the following:

4.5.5.b.I.(i)(A) Acceptance or failure of inspections and tests;

4.5.5.b.I.(i)(B) Acceptance or failure of daily work unit performance;

4.5.5.b.I.(i)(C) Problems encountered and corrective action taken;

4.5.5.b.I.(i)(D) On-going corrective action;

4.5.5.b.I.(i)(E) In-field modifications; and

4.5.5.b.I.(i)(F) Assessment of overall project quality.

#### 4.5.6. Revegetation Plan.

##### 4.5.6.a. Function of Annual and Biennial Cover Crops.

On areas where erosion is likely to occur, rapid establishment of vegetative cover is required. Immediate revegetation by the use of seeding and mulching with approved annuals and biennials on such areas must be approved as a means for achieving temporary vegetative cover only.

**4.5.6.b. Minimum Requirements of Soil Amendments.**

**4.5.6.b.A.** A minimum of six hundred pounds per acre (600 lbs/acre) of 10-20-10 or 10-20-20 fertilizer, or equivalent, must be applied. Fertilizer rates based on soil analyses conducted by a qualified lab may be substituted for the minimum fertilizer rate.

**4.5.6.b.B.** Lime is required where soil pH is less than 5.5. Lime rates must be such that a standard soil pH of 6.0 is achieved.

**4.5.6.b.C.** Mulch must be used on all disturbed areas. A list of approved materials and minimum application rates is available from the director.

**4.5.6.c. Standards for Evaluating Vegetative Cover.**

**4.5.6.c.A. Final Revegetation Report.**

The report must be submitted to the director within sixty (60) days after the final cover or cap has been completed and contain the actual acreage planted including the application rates of soil amendments, including fertilizer, lime, mulch, and seeding mixture.

**4.5.6.c.B. Time for Inspection.**

Prior to the spring and fall planting seasons, the operator must review all disturbed areas. Those areas that will not be disturbed again must be graded, limed, fertilized, mulched, and seeded. Those areas that have been previously seeded but are deficient of vegetative cover must be reseeded to establish a satisfactory stand of vegetation. Disturbed areas that may sit idle for more than sixty (60) days must be temporarily revegetated.

**4.5.6.c.C. Standards for Perennials.**

Standards for legumes and perennial grasses are required to achieve at least a ninety percent (90%) ground cover. Substandard areas must not exceed one-quarter acre in size, nor total more than ten percent (10%) of the revegetated area.

**4.5.7. Miscellaneous.**

All facilities must be designed to meet the following requirements:

**4.5.7.a.** A method of controlling any dust or windblown debris must be included in the facility design. The factors which will be considered by the director when evaluating alternative provisions for controlling dust and windblown debris includes the remoteness of the facility, natural screening and windbreaks, and waste types;

4.5.7.b. Access to the facility must be restricted through the use of fencing, natural barriers, or other methods approved in writing by the director;

4.5.7.c. A minimum separation distance of one hundred (100) feet must be maintained between the limits of waste filling and all adjacent property lines. A minimum distance of fifty (50) feet must be maintained between any permanent berms or excavations associated with the facility (excluding surface water diversion structures) and all adjacent property lines;

4.5.7.d. The facility must be designed so that final grades in each phase are reached as soon as possible and the open area used for refuse filling is minimized;

4.5.7.e. The grade of the final surface of the facility must not be less than three percent (3%) nor more than twenty-five percent (25%) unless otherwise approved by the director as a part of the issued permit. Long slopes must incorporate runoff control measures and terracing in order to minimize erosion. For sites having a natural slope greater than twenty-five percent (25%), a slope up to thirty-three percent (33%) may be considered acceptable if terracing is incorporated at least every twenty (20) feet of vertical distance with runoff control.

4.5.7.f. All facilities which may obstruct flight patterns to instrument approach airports must follow Federal Aviation Administration guidelines in designing intermediate and final grades;

4.5.7.g. A permittee storing waste must provide a sufficient number of containers to contain solid waste generated during periods between regularly scheduled collections;

4.5.7.h. An individual container or bulk container used for the storage of solid waste must have the following characteristics:

4.5.7.h.A. The container must be constructed to be easily handled for collection; and

4.5.7.h.B. The container must be corrosion resistant and compatible with waste to be stored;

4.5.7.i. An individual container or bulk container used for the storage of putrescible solid waste must also have the following characteristics:

4.5.7.i.A. The container must be equipped with a tight fitting lid or cover, or otherwise sealed; and

4.5.7.i.B. The container must be watertight, leak proof, insect proof, and rodent proof; and

4.5.7.j. A permittee that stores waste outside of containers must tie the wastes securely in bundles of a size that can be readily handled for collection, and in a manner that minimizes litter, safety hazards, and fire

hazards.

#### **4.6. General Operational Requirements.**

##### **4.6.1. General Requirements.**

4.6.1.a. No person may operate or maintain a solid waste facility after the effective date of this rule, that does not conform to an approved plan of operation and the following:

4.6.1.a.A. Daily deposition of solid waste must be confined to as small an area as practical;

4.6.1.a.B. Provisions must be made to confine windblown material within the active disposal area;

4.6.1.a.C. At the conclusion of each day of operation, all windblown material must be collected and properly disposed of in the active disposal area in accordance with the provisions of section 4.6.1 of this rule, unless the operator establishes, to the satisfaction of the director, that:

4.6.1.a.C.(a) All windblown material cannot be collected using reasonable efforts because of conditions beyond the control of the operator;

4.6.1.a.C.(b) Windblown material which can be collected using a reasonable effort has been collected and disposed of properly;

4.6.1.a.D. Putrescible materials such as spoiled foods and animal carcasses must be immediately compacted and covered by the use of daily cover and other means;

4.6.1.a.E. Permittees of all SWLFs must control public access and prevent unauthorized vehicular traffic through the use of artificial barriers, including fencing, natural barriers, both, or other methods approved in writing by the director, as appropriate to protect human health and the environment;

##### **4.6.1.a.F. Procedures for Excluding the Receipt of Regulated Hazardous Waste.**

4.6.1.a.F.(a) The application must contain an operator implemented program at the facility to detect and prevent attempts to dispose of hazardous wastes (regulated under Subtitle C of RCRA and defined in Part 161 of Chapter 40 of the CFR) and polychlorinated biphenyls (PCB) wastes at the facility (regulated under the Toxic Substances Control Act, and as defined in Part 761 of Chapter 40, or as reflected in Chapter 22, Article 18).

4.6.1.a.F.(b) Measures that solid waste facility operators must incorporate in their programs to exclude receipt of hazardous waste, include at a minimum:

4.6.1.a.F.(b)(A) Random inspections of incoming loads, inspection of suspicious loads, recordkeeping of inspection results (including date, time, name of the hauling firm, driver, source of waste, vehicle

identification numbers, and all observations made by the inspector), training of personnel to recognize hazardous waste, and procedures for notifying proper division authorities if a regulated hazardous waste is found at the facility unless the permittee takes other steps approved by the director in writing to ensure that incoming loads do not contain regulated hazardous wastes or PCB wastes;

4.6.1.a.F.(b)(B) Records of any inspections, activities and information must be reported on a form prescribed by the director and copies of these inspection records and all related information must be retained in the SWLF's operating record.

4.6.1.a.F.(b)(C) Training of facility personnel to recognize regulated hazardous waste and PCB wastes; these records must be maintained in the SWLFs operating record; and

4.6.1.a.F.(c) Procedures for providing written notification to the director as required under Subtitle C of RCRA, or applicable rules and regulations promulgated under Chapter 22, Article 18, if a regulated hazardous waste or PCB waste is discovered at the facility.

4.6.1.a.G. Effective means must be taken to limit and control public access and prevent illegal dumping of wastes at the active disposal area to minimize exposure of the public to hazards;

4.6.1.a.H. Effective means, including the use of daily cover, must be taken to prevent or control on-site populations of disease vectors, including flies, rodents, other insects, vermin and other organisms capable of directly or indirectly transmitting infectious diseases or pathogenic organisms from one person to another, or from an animal to a person, using techniques appropriate for the protection of human health and the environment.

4.6.1.a.I. Equipment must be provided, and daily cover material made available, to control accidental fires. Also, arrangements must have been made previously with the local fire protection agency to utilize their services when needed;

4.6.1.a.J. An attendant must be on duty at the facility at all times while it is open for public use;

4.6.1.a.K. A gate must be provided at the entrance to the operation and it must be kept locked when an attendant is not on duty;

4.6.1.a.L. The gate area must be policed at the beginning of each day of operation to remove any solid waste which has been indiscriminately dumped during periods when the facility was closed;

4.6.1.a.M. A sign, acceptable to the director, must be posted at the entrance of any facility operated for public use which indicates the facility name, permit number, the hours that solid waste is received, the hours of operation, including hours for exempt disposal of solid waste, waste types accepted, penalties for unauthorized use, necessary safety precautions, and any other pertinent information. Such signs must be posted and maintained for the duration of the active life of the SWLF, be clearly visible, readable,

and uniform throughout the operation, be permanently fixed, and made of durable material;

4.6.1.a.N. The facility must be surrounded with rapidly growing trees, shrubbery, fencing, berms, or other appropriate means to screen it from the surrounding area and to provide a wind break;

4.6.1.a.O. Means acceptable to the director must be taken to control dust resulting from facility operation;

4.6.1.a.P. Daily cover must be applied to the active disposal area to control the prohibited act of scavenging;

4.6.1.a.Q. All burning is prohibited in accordance with statutes, rules and regulations of the West Virginia Office of Air Quality;

4.6.1.a.Q.(a) All open burning of solid waste, except for the infrequent burning of land clearing debris, diseased trees, or debris from emergency clean-up operations, except as approved by the Office of Air Quality is prohibited at all SWLFs.

4.6.1.a.R. Provisions must be made for backup equipment in the event of operating equipment breakdown;

4.6.1.a.S. All topsoil within the facility construction limits must be salvaged and stored within the property boundaries for use in facility closure. All stockpiled soil material which is not anticipated to be used within six (6) months must be seeded; and

4.6.1.a.T. All access roads to the active area of the operation must be maintained in good condition so as to prevent sedimentation of drainage ways.

#### 4.6.2. Solid Waste Placement.

##### 4.6.2.a. Solid Waste Placement and Compaction.

###### 4.6.2.a.A. Working Faces.

Solid waste must be placed for disposal only at designated working faces. Working face width must be minimized and must not exceed one hundred (100) feet unless otherwise approved by the director. The slopes of working faces must not exceed thirty-three and one-third percent (33 1/3%). To prevent lateral migration of leachate through the final cover, all daily and intermediate cover from each lift of solid waste within twenty-five (25) feet of the final cover must be removed.

###### 4.6.2.a.B. Daily Cell Height.

Daily cell height must not exceed eight (8) feet in the vertical dimension except in the middle area of the daily cell to divert stormwater. The vertical dimension of the middle area of the daily cell must not exceed eleven (11) feet.



#### 4.6.2.a.C. Layering and Compaction.

Solid waste must be placed in layers not exceeding two (2) feet in depth and compacted with a minimum of three (3) passes with an 815 Caterpillar compactor or other equipment of equivalent compacting ability, or as otherwise approved by the director.

#### 4.6.2.b. Cover Material Application.

##### 4.6.2.b.A. Daily Cover.

Except as provided in section 4.6.2.b.B, the permittee of all SWLFs must cover the entire exposed solid waste disposal area with a minimum thickness of six inches of compacted cover material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.

4.6.2.b.A.(a) Alternative materials of an alternative thickness (other than at least six inches of earthen material) may be approved by the director if the permittee demonstrates in writing that the alternative material and thickness does, or will control disease vectors, fires, odors, windblown material, and scavenging and does not present a threat to human health and the environment.

4.6.2.b.A.(b) The director may grant a temporary waiver from the requirement of sections 4.6.2.b.A and 4.6.2.b.A.(a) if the permittee demonstrates that there are extreme seasonal climatic conditions that make meeting such requirements impractical.

##### 4.6.2.b.B. Intermediate Cover.

Solid waste fill surfaces which will remain exposed to weather for periods in excess of thirty (30) days must have a minimum of twelve (12) inches of compacted cover material applied within thirty (30) days of completion of the fill surface.

##### 4.6.2.b.C. Final Cover.

Solid waste fill surfaces which will receive no further solid waste deposits must place final cover in accordance with section 6.1.5.a.A of this rule.

##### 4.6.2.b.D. Availability.

Cover material must be available from the facility site or other designated sources in sufficient quantities to provide:

4.6.2.b.D.(a) Six (6) inches of compacted daily cover material.

4.6.2.b.D.(b) Twelve (12) inches of compacted intermediate cover material.

4.6.2.b.D.(c) Sufficient cover material, as required in part

4.6.2.b and section 6 of this rule.

**4.6.2.c. Waste Placement in Winter.**

For the installation of all liners, a layer of waste at least four (4) feet thick, or an adequate amount of other frost protection material, must be placed over the granular blanket in all portions of the lined area prior to December 31 of the same year of the liner was constructed. Waste must not be placed during the winter on any portion of the liner not having a four (4) foot thick layer of waste or other adequate frost protection material covering it after December 31 of each year. Those portions of the liner must be investigated for density and effects from freeze-thaw as specified by the director and must be repaired and recertified during the next construction season if required, prior to additional waste placement. These requirements may be waived by the director upon the request of the permittee.

**4.7. Acceptable and Unacceptable Wastes.**

**4.7.1. Acceptable Wastes.**

Landfills may receive the following types of solid wastes, as authorized by the facility's permit, or by written permission of the director that such waste is acceptable:

- 4.7.1.a. Agricultural waste;
- 4.7.1.b. Commercial waste;
- 4.7.1.c. Compost;
- 4.7.1.d. Construction waste;
- 4.7.1.e. Debris;
- 4.7.1.f. Demolition waste;
- 4.7.1.g. Discarded material;
- 4.7.1.h. Garbage;
- 4.7.1.i. Household waste;
- 4.7.1.j. Industrial waste;
- 4.7.1.k. Inert waste;
- 4.7.1.l. Municipal solid waste;
- 4.7.1.m. Non-municipal incinerator ash;
- 4.7.1.n. Putrescible waste;
- 4.7.1.o. Refuse;

- 4.7.1.p. Residential waste;
- 4.7.1.q. Rubbish;
- 4.7.1.r. Scrap metal;
- 4.7.1.s. Sludge;
- 4.7.1.t. Trash;
- 4.7.1.u. Bulky goods;
- 4.7.1.v. Other materials approved by the director; and
- 4.7.1.w. Properly treated infectious wastes.

**4.7.2. Unacceptable wastes.**

Landfills may not receive the following wastes under any conditions, unless otherwise approved by the director:

- 4.7.2.a. Free liquids;
- 4.7.2.b. Regulated hazardous wastes;
- 4.7.2.c. Unstabilized sewage sludge or sludges that have not been dewatered, or contain less than 20% solids by weight;
- 4.7.2.d. Pesticide containers that have not been triple rinsed and crushed;
- 4.7.2.e. Drums that are not empty and not crushed, except as provided under section 4.13.5.a of this rule;
- 4.7.2.f. Waste which may be infectious waste, or is recognizable treated noninfectious medical waste, as defined in section 2 of this rule, must be labeled prior to being transported off-site. Treated medical waste that will pass through a screen with a one-half inch ( $\frac{1}{2}$ " ) grid is not considered recognizable. The label must be sized and attached in the manner required by Section 6.3.1 of Title 46, CSR Series 56 for infectious medical waste unless:
  - 4.7.2.f.A. The waste was generated by a household or by an individual during self-care or self-treatment; or
  - 4.7.2.f.B. The waste has not been compacted and is accompanied by a label, manifest, or shipping document which:
    - 4.7.2.f.B.(a) Identifies the generator of the waste by name, address and business telephone number of the generator;
    - 4.7.2.f.B.(b) Identifies the name, address and business telephone number of the generator of the facility at which the waste was rendered noninfectious;

4.7.2.f.B.(c) Identifies the amount of waste rendered noninfectious by weight, volume, or number of containers, and the method of treatment;

4.7.2.f.B.(d) Includes a signed and dated certification by the facility at which the waste was rendered noninfectious that states: "I hereby certify under penalty of law that this waste has been rendered noninfectious in accordance with procedures required by Infectious Medical Waste, Title 46, CSR Series 56,"; and

4.7.2.f.B.(e) Maintained on file at the municipal solid waste facility receiving that waste for final disposal, with the exception that labels permanently attached to the waste are not required to be maintained on file.

#### 4.7.3. Wastes Acceptable under Certain Conditions.

4.7.3.a. The waste has been rendered noninfectious. Certifications establishing the wastes as noninfectious must be maintained for a period of three (3) years at the facility receiving the waste for disposal.

4.7.3.b. Waste containing PCBs at concentrations of fifty parts per million (50 ppm) or greater;

4.7.3.c. Municipal incinerator ash, except as provided under section 4.13.10 of this rule; or

4.7.3.d. Petroleum-contaminated soils, except as provided under section 4.13.11 of this rule.

#### 4.8. Leachate Management.

##### 4.8.1. General Requirements.

4.8.1.a. Leachate must be removed from all collection tanks, manholes, lift stations, sumps, or other structures used for solid waste leachate storage as often as necessary to allow for gravity drainage of leachate from the facility at all times.

4.8.1.b. Any liquid which comes in contact with waste or accumulates in a portion of the facility where active waste disposal operations are occurring must be handled as leachate and properly treated as specified in section 4.8 of this rule unless otherwise approved by the director in writing.

4.8.1.c. All leachate collection and detection lines must be cleaned with a water jet cleanout device or equivalent immediately after construction, after the first layer of waste has been placed over an entire phase and annually thereafter.

4.8.1.d. Except as otherwise provided in sections 4.8.1.e through 4.8.1.f of this rule, leachate must be collected, treated, and then directly discharged into a POTW or other treatment facility permitted by the division. In addition, the operator must operate a leachate treatment facility as provided in section 4.8.1.g of this rule within three (3) years following the

detection of leachate in the collection or handling system, unless otherwise approved by the director. In the case of an industrial solid waste landfill, the leachate collection and treatment facility must be in place and operable prior to the commencement of landfill operations.

4.8.1.e. Leachate may be collected, treated on-site, and then discharged into a receiving stream under a permit issued by the division under W. Va. Code §22-11, and the rules and regulations promulgated thereunder, if the director approves this method in the solid waste facility permit issued under this rule. On-site treatment and discharge to a receiving stream will not be allowed unless direct discharge into a POTW or other permitted facility is not reasonably possible.

4.8.1.f. Except for industrial solid waste landfills, leachate may be collected, treated on-site, and then be applied to land via spray irrigation on a temporary basis if the director approves this method in the solid waste facility permit issued under this rule. On-site treatment and subsequent land application will not be allowed unless, at a minimum:

4.8.1.f.A. Discharge into a POTW or other permitted treatment facility is not possible;

4.8.1.f.B. Discharge of the treated leachate into a receiving stream in a manner consistent with W. Va. Code §22-11, and the rules and regulations promulgated thereunder, is not attainable; and

4.8.1.f.C. Temporary spray irrigation is approved in the municipal solid waste facility permit issued under this rule.

4.8.1.g. Except for industrial solid waste landfills, for the first three (3) years following initial discharge of leachate into the collection and handling system, but not thereafter unless otherwise approved by the director, leachate may be handled by vehicular transportation to and leachate treatment at an off-site treatment facility. The continued use of vehicular transportation of leachate to an off-site treatment facility will not be allowed unless, at a minimum, one of the following applies:

4.8.1.g.A. If the director determines that a direct discharge into a POTW or other permitted treatment facility is not reasonably attainable; and

4.8.1.g.B. If the director determines that a discharge of treated leachate into a receiving stream in a manner consistent with W. Va. Code §22-11, and the rules promulgated thereunder, is not attainable without potential degradation of the receiving stream within three (3) years.

4.8.1.h. If a permittee using vehicular transportation to and treatment at an off-site treatment facility loses the ability to dispose of leachate at that facility and is unable to secure an alternative off-site treatment facility acceptable to the director within fifteen (15) days from loss of its approved treatment facility, implementation of the treatment plan required by section 4.8.1.f of this rule must begin immediately. This leachate treatment system must be completed and operational by the date on which off-site treatment becomes unavailable.

4.8.1.i. Except for industrial solid waste landfills, in conjunction with any of the treatment methods in section 4.8.1 of this rule, the temporary recirculation of leachate may be utilized if the following conditions exist:

4.8.1.i.A. The area subject to leachate recirculation previously has been filled with solid waste;

4.8.1.i.B. There is sufficient waste capacity to absorb the leachate;

4.8.1.i.C. The area subject to leachate recirculation is underlain by a leachate collection system; and

4.8.1.i.D. Leachate recirculation is conducted with a piping system approved by the director located under the intermediate cover and causes no odors, runoff, or ponding.

4.8.1.j. The permittee must immediately notify the director and describe remedial steps to be taken if:

4.8.1.j.A. Operation of the leachate treatment facility under this rule cannot prevent the facility from:

4.8.1.j.A.(a) Violating the terms of its permit, this rule, the Clean Water Act and the rules and regulations promulgated thereunder, or W. Va. Code §22-11 and the rules and regulations promulgated thereunder; or

4.8.1.j.A.(b) Causing surface water pollution or groundwater degradation, contamination, or pollution;

4.8.1.j.B. The facility is generating a quality or quantity of leachate that exceeds the design capacity of the treatment system;

4.8.1.j.C. For leachate treatment plans that include vehicular transportation of leachate to an off-site treatment plant, the total flow of leachate from the solid waste facility exceeds thirty thousand (30,000) gallons in a period of thirty (30) consecutive days;

4.8.1.j.D. The contractual agreement for leachate treatment by an off-site treatment system is breached or expired; or

4.8.1.j.E. The quality or quantity of solid waste being disposed at the facility changes from that set forth in the permit.

#### **4.8.2. Leachate Treatment System, Design, and Construction.**

4.8.2.a. Tanks, containers, and impoundments for storing leachate at a solid waste facility before or during treatment must be constructed and lined in accordance with sections 4.8.2 and 4.8.3 of this rule.

4.8.2.b. A leachate treatment system must contain impoundments or tanks, for the storage of leachate prior to its treatment to effluent standards, that have a flow equalization and surge capacity equal to at least thirty (30) days of the leachate production estimated from the facility.

4.8.2.c. Impoundments or tanks must be aerated as necessary to prevent and control odors.

4.8.2.d. The storage capacity of impoundments and tanks at a facility must be increased prior to each major phase of construction and as otherwise necessary.

4.8.2.e. Necessary collection and containment systems must be installed prior to the deposition of solid waste at the facility. A treatment or handling system approved by the director must be installed prior to the storage or disposal of solid waste.

4.8.2.f. Construction of the leachate treatment facility and associated works must be supervised by a registered professional engineer. At the completion of construction of the facility, or at the completion of a modification to the capacity or treatment technique at the facility, the operator must submit to the director a certification under the seal of a registered professional engineer that the work was completed in accordance with the plans and designs in the operator's permit.

4.8.2.g. A modification to a leachate treatment system must be completed within one (1) year after construction is initiated, unless the director specifies a shorter period of time in the permit modification.

#### 4.8.3. Liquid Storage.

##### 4.8.3.a. Aboveground and Onground Tank Requirements.

4.8.3.a.A. Tanks may be constructed of concrete, steel, or other material approved by the director. Tanks must be designed to prevent structural failure and be supported on a well-drained stable foundation which prevents movement, rolling, or settling of the tank.

4.8.3.a.A.(a) Bottoms of steel tanks that rest on earthen material must be cathodically protected with either sacrificial anodes or an impressed current system which is designed, fabricated, and installed in accordance with the approved engineering report.

4.8.3.a.A.(b) The exterior surfaces of all aboveground and onground steel storage tanks must be protected by a primer coat, a bond coat, and two (2) or more final coats of paint or have at least an equivalent surface coating system designed to prevent corrosion and deterioration.

4.8.3.a.A.(c) The interior of all aboveground and onground tanks must consist of a material or must be lined with a material compatible to the liquid being stored.

4.8.3.a.B. All aboveground and onground tanks must have a secondary containment system which may consist of dikes, liners, pads, ponds, impoundments, curbs, ditches, sumps or other systems capable of containing the liquid stored.

4.8.3.a.B.(a) The design volume for the secondary containment system must be one hundred and ten percent (110%) of the volume of either the



largest tank within the containment system or the total volume of all interconnected tanks, whichever is greater.

4.8.3.a.B.(b) The secondary containment system must be constructed of a material compatible with the liquid stored. The containment system must be constructed of either:

4.8.3.a.B.(b)(A) A minimum one (1) foot layer of compacted soil with a maximum permeability of  $1 \times 10^{-7}$  centimeters per second;

4.8.3.a.B.(b)(B) A concrete pad of a sufficient thickness to maintain integrity for the lifetime of the tank with a corrosion resistant coating; or

4.8.3.a.B.(b)(C) A geosynthetic liner of a minimum thickness equal to sixty (60) mils.

4.8.3.a.B.(c) A system must be designed to contain and remove storm water from the secondary containment area. Provisions must be included for the removal of any accumulated precipitation (rain, snow or ice) and be initiated within twenty-four (24) hours or when ten percent (10%) of the storage capacity is reached; whichever occurs first. Disposal must be in compliance with W. Va. Code §§22-11, 22-15 and 22-12, and all applicable federal and state statutes, rules and regulations.

4.8.3.a.C. All aboveground and onground tanks must be equipped on the tank's discharge side with an overfill prevention system which may include, but not be limited to: level sensors and gauges, high level alarms or automatic shutoff controls. The overfill control equipment must be inspected weekly by the facility operator to ensure it is in good working order.

4.8.3.a.D. The exposed exterior of all aboveground and onground tanks must be inspected weekly by the facility operator for adequacy of the cathodic protection system, leaks, corrosion, and maintenance deficiencies. Interior inspection of tanks must be performed whenever the tank is drained. If the inspection reveals a tank or equipment deficiency, leak or any other deficiency which could result in failure of the tank to contain the liquid, remedial measures must be taken immediately to eliminate the leak or correct the deficiency. Inspection reports must be maintained and made available to the director upon request for the lifetime of the liquid storage system.

4.8.3.a.E. All uncovered tanks must have a minimum two (2) feet freeboard. Odor and vector control must be practiced when necessary.

#### 4.8.3.b. Underground Tank Requirements.

4.8.3.b.A. Underground tank systems including tanks and piping must be placed a minimum of two (2) feet above the seasonally high groundwater table and a minimum of two (2) feet vertical separation must be maintained between bedrock and the lowest point of the tank. The tank system must be installed in accordance with manufacturer installation instructions.

4.8.3.b.B. Tank systems may be constructed of fiberglass reinforced plastic, steel that is cathodically protected and coated with a

suitable dielectric material, steel that is clad with fiberglass, or any other materials approved by the director.

4.8.3.b.C. The secondary containment and a continuous leak detection system must be installed in the form of a double-walled tank, designed as an integral structure so that any release from the inner tank is completely contained by the outer shell.

4.8.3.b.C.(a) The interstitial space must be monitored at least once per week by the facility operator for tightness using pressure monitoring, vacuum monitoring, electronic monitoring or an approved equivalent method.

4.8.3.b.C.(b) Any tank system vulnerable to corrosion must be protected from both corrosion of the primary tank interior and the external surface of the outer shell.

4.8.3.b.C.(b)(A) All resistant coatings applied to the primary tank interior must be chemically compatible with the liquid to be stored.

4.8.3.b.C.(b)(B) All cathodic protection systems must be tested within six (6) months of installation and at least every three (3) years thereafter unless otherwise specified by the director. A deficiency in the cathodic protection system must be corrected upon discovery.

4.8.3.b.D. All underground tanks must be equipped with an overfill prevention system which may include but not be limited to: level sensors and gauges, high level alarms, or automatic shutoff controls. The overfill control equipment must be inspected weekly by the facility operator to ensure it is in good working order.

4.8.3.b.E. Inspection and leak detection monitoring reports must be maintained and made available upon request for the lifetime of the liquid storage system.

#### 4.8.3.c. Surface Impoundment Requirements.

4.8.3.c.A. Any surface impoundment must be constructed a minimum of five (5) feet above the seasonally high groundwater table. A minimum of four (4) feet vertical separation must be maintained between the base of the constructed liner and bedrock. Any surface impoundment that meets the definition of a "dam" found in §22-14-3 of the Code of W. Va. must first obtain a certificate of approval for a dam before a solid waste facility permit can be approved under this rule.

4.8.3.c.B. Surface impoundments subject to this rule must be constructed with a liner system consisting of a minimum of two (2) liners and a leak detection system. Surface impoundments currently in use that do not have liners and a leak detection system as prescribed in section 4.8.3.c of this rule must either be closed or retrofitted to conform to this section within six (6) months following the effective date of this rule. Liner construction must include the following:

4.8.3.c.B.(a) The top liner must be a synthetic liner with a minimum thickness equal to sixty (60) mils. A protective cover must be placed over this liner to prevent damage during clean-out operations.

4.8.3.c.B.(b) A leak detection and removal system must be installed between the two (2) synthetic liners.

4.8.3.c.B.(c) The lower composite liner must consist of a minimum of two (2) feet of compacted clay with a maximum permeability of  $1 \times 10^{-7}$  centimeters per second overlain by a synthetic liner that is at least sixty (60) mils thick.

4.8.3.c.B.(d) Quality assurance and quality control testing must be performed by the project engineer in conformance with the requirements identified in section 4.5.5 of this rule.

4.8.3.c.C. A minimum of two (2) feet of freeboard must be maintained in all surface impoundments. Odor and vector control must be practiced when necessary.

4.8.3.c.D. A minimum of three (3) groundwater monitoring wells, one upgradient and two (2) downgradient of any surface impoundment may be required to be installed and sampled at the discretion of the director in accordance with this rule.

#### 4.8.3.d. Closure of Liquid Storage Facilities.

4.8.3.d.A. The permittee or operator of the liquid storage facility must prepare a written closure plan for the liquid storage facility and submit the plan with the permit application for the solid waste management facility.

4.8.3.d.B. The permittee or operator must complete closure activities in accordance with the approved closure plan and within one hundred eighty (180) days after liquid collection has ceased.

4.8.3.d.C. At closure, all liquid and solid waste must be removed from the tank or surface impoundment, connecting lines, and any associated secondary containment systems. All solid waste removed must be properly handled and disposed of in conformance with the provisions of the Act and applicable federal and state requirements. All connecting lines must be disconnected and securely capped or plugged.

4.8.3.d.C.(a) Underground tanks must be removed or thoroughly cleaned to remove traces of waste and all accumulated sediments and then filled to capacity with a solid inert material, such as clean sand or concrete slurry. If groundwater is found to be contaminated from the tank, the tank and surrounding contaminated soil must be removed and appropriately disposed. Other corrective actions to remediate the contaminant plume may be required by the director.

4.8.3.d.C.(b) Accessways to aboveground and onground tanks must be securely fastened in place to prevent unauthorized access. Tanks must either be stenciled with the date of permanent closure or removed. The

secondary containment system must be perforated to provide for drainage.

**4.8.3.d.C.(c)** For surface impoundments, all waste residues, contaminated system components (e.g., liners) contaminated subsoils, structures, and equipment contaminated with waste must be removed and appropriately disposed. If the groundwater surrounding the impoundment is contaminated, other corrective actions to remediate a contaminant plume may be required by the director. If the groundwater surrounding the impoundment is found not to be contaminated, the liner system may remain in place if drained, cleaned to remove all traces of waste, and both liners punctured so that drainage is allowed. The impoundment must be backfilled and regraded to the surrounding topography.

#### **4.8.4. Leachate Analysis.**

The permittee must comply with the following sampling requirements at all monitoring points of the leachate collection and detection system as prescribed by the director:

**4.8.4.a.** On a daily basis, the flow rate and volume of flowing liquids from the leachate collection and detection systems must be determined; and

**4.8.4.b.** On a quarterly basis, the chemical composition of the leachate flowing into the leachate treatment system must be determined through the analysis of the leachate for the parameters listed in Appendix I, or as specified by the facility permit, or order of the director must be conducted.

**4.9. Water Quality Standards.** All permittees are required under the provisions of W. Va. Code §22-11 and the rules promulgated thereunder to comply with all applicable water quality standards.

**4.10. Landfill Gas Management.** Decomposition gases generated within a landfill must be controlled to avoid hazards to health, safety, or property. Measures to control decomposition gases must be undertaken in accordance with the following requirements:

#### **4.10.1. Explosive Gases Control.**

**4.10.1.a.** Effective means must be utilized by the permittee to prevent the migration of explosive gases generated in any facility structure, and to ensure that:

**4.10.1.a.A.** The concentration of methane or other explosive gases generated by the facility, including the waste fill, or any facility structure (excluding the leachate collection system or gas control or recovery system components) or in the soils or air at or beyond the facility property boundary does not exceed 25 percent (25%) of the lower explosive limit for methane or other such explosive gases, in facility structures.

**4.10.1.a.B.** The concentration of methane and other explosive gases does not exceed the lower explosive detection limit for methane or other explosive gases at the facility property boundary.

#### 4.10.2. Gas Monitoring Program.

Permittees of all SWLFs must implement an ongoing (routine) explosive gas monitoring program to ensure that the standards of section 4.10.1 of this rule are met. The type and frequency of monitoring must be approved by the director and be based on the following factors:

4.10.2.a. Soil conditions;

4.10.2.b. Hydrogeologic conditions surrounding the facility, including the disposal area;

4.10.2.c. The hydraulic conditions surrounding the facility, including the disposal site; and

4.10.2.d. The location of the any manmade or other facility structures and property boundaries.

4.10.2.e The minimum frequency of monitoring must be quarterly.

#### 4.10.3. Notification.

Upon detection of methane or other explosive gas levels exceeding the limits specified in section 4.10.1 of this rule, the landfill owner and the appropriate officials identified in the contingency plan must:

4.10.3.a. Immediately take all necessary steps to ensure the safety and protection of human health and must immediately notify the director, and

4.10.3.b. Within seven days of detection, place in the operating record the methane gas levels detected and a description of the steps taken to protect human health; and

4.10.3.c. Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the director that the plan has been implemented.

4.10.3.d. The plan must describe the nature and extent of the problem and the proposed remedy.

4.10.3.e. The director may establish alternative schedules for demonstrating compliance with sections 4.10.3.b, 4.10.3.c, and 4.10.3.d.

#### 4.11. Groundwater Monitoring and Corrective Action Program.

##### 4.11.1. Groundwater Monitoring Program.

The groundwater sampling and analysis requirements for the groundwater monitoring system are as follows:

##### 4.11.1.a. Groundwater Sampling and Analysis Requirements.

The groundwater monitoring program submitted by the permittee must include consistent sampling and analysis procedures that are designed to ensure

monitoring results that provide an accurate representation of the groundwater quality at the background and downgradient wells installed in compliance with section 3.8.4.a after approval by the director. The permittee must retain a copy in the operating record. At a minimum, the program must include procedures and techniques for:

- 4.11.1.a.A. Sample collection;
- 4.11.1.a.B. Sample preservation and shipment;
- 4.11.1.a.C. Analytical procedures;
- 4.11.1.a.D. Chain of custody control; and
- 4.11.1.a.E. Quality assurance and quality control.

4.11.1.b. The groundwater monitoring program must include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measures hazardous constituents and other monitoring parameters in groundwater samples. The sampling and analysis methods must follow the approved quality assurance/quality control plan, and the director will require resampling if he or she believes the samples were not properly sampled or analyzed.

4.11.1.b.A. Groundwater samples must not be field-filtered prior to laboratory analysis, except when monitoring for dissolved metals.

4.11.1.c. The permittee must determine groundwater flow rate and direction of groundwater in the uppermost significant aquifer at least annually.

4.11.1.c.A. The sampling procedures and frequency must be protective of human health and the environment.

4.11.1.d. The permittee must establish background groundwater quality for each of the monitoring parameters of constituents required in the particular groundwater monitoring program that applies to the facility, as determined by the Phase I, or Phase II monitoring program. The minimum number of samples used to establish background groundwater quality must be consistent with the appropriate statistical procedures as specified in section 4.11.1.g of this rule.

4.11.1.e. Background quality at existing facilities may be based on sampling of wells that are not upgradient from the waste management area where:

4.11.1.e.A. Hydrogeologic conditions do not allow the permittee to determine what wells are upgradient; and

4.11.1.e.B. Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells.

4.11.1.e.C. Groundwater elevations must be measured in each well

immediately prior to purging, each time groundwater is sampled.

4.11.1.e.D. The permittee must determine the rate and direction of groundwater flow each time groundwater is sampled.

4.11.1.e.E. Groundwater elevations in wells which monitor the same waste management area must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

4.11.1.e.F. The sampling procedures must be those specified under section 4.11.2.b for Phase I Detection Monitoring, sections 4.11.3.b and 4.11.3.c for Phase II Assessment Monitoring, and section 4.11.5 for corrective action.

4.11.1.f. The permittee must determine whether there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined for Phase I and Phase II monitoring programs. The permittee must make these statistical determinations each time he or she assesses groundwater quality.

4.11.1.f.A. In determining whether a statistically significant increase has occurred, the permittee must compare the groundwater quality at each monitoring well at the waste management boundary for each parameter or constituent to the background value for that parameter or constituent, according to the statistical procedures.

4.11.1.f.B. The permittee must determine whether there has been a statistically significant increase at each monitoring well at the facility boundary immediately after completion of sampling.

4.11.1.g. The permittee must employ one of the following statistical procedures in combination with the designated sampling requirement to determine a statistically significant increase. The permittee must specify in the operating record which one of the statistical methods was used in evaluating groundwater monitoring data for each hazardous constituent. The statistical test chosen must be conducted separately for each hazardous constituent in each well.

4.11.1.g.A. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure or methods must include estimation and testing of the contrasts between each compliance (downgradient) well's mean and the background mean levels for each constituent.

4.11.1.g.B. An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The procedure or method must include estimation and testing of the contrasts between each compliance (downgradient) well's mean and the background mean levels for each constituent.

4.11.1.g.C. A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the



background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit, or

4.11.1.g.D. A control chart approach that gives control limits for each constituent.

4.11.1.g.E. Another statistical test method that meets the performance standards of section 4.11.1.i.D may be utilized, provided that:

4.11.1.g.E.(a) The permittee must place a justification for this alternative in the operating record and notify the director of the use of this alternative test; and

4.11.1.g.E.(b) The justification must demonstrate that the alternative method meets the performance standards of section 4.11.1.i.

4.11.1.h. The director may establish an alternative sampling procedure and statistical test for any of the constituents listed in Appendix I or II of this rule, as required to protect human health and the environment. Factors to consider for establishing this alternative statistical procedure include:

4.11.1.h.A. If the distributions for different constituents differ, more than one procedure may be needed. The permittee must show that the normal distribution is not appropriate if using a nonparametric or other methodology not requiring an assumption of normality. For any statistic not based on a normal distribution, a goodness of fit test must be conducted to demonstrate that the normal distribution is not appropriate. Other tests must be conducted to demonstrate that the assumptions of the statistic or distribution are not grossly isolated;

4.11.1.h.B. Each parameter or constituent must be tested for separately. Each time that a test is done, the test for individual constituents must be done at a type I error level no less than 0.01. A multiple comparison procedure may be used at a type I experiment-wide error rate no less than 0.05. The owner or operator must evaluate the ability of the method to detect contamination that is actually present and may be required to increase the sample size to achieve an acceptable error level;

4.11.1.h.C. The statistical procedure must be appropriate for the behavior of the parameters or constituents involved. It must include methods for handling data below the limit of detection. The permittee must evaluate different ways of dealing with values below the limit of detection and choose the one that is most protective of human health and the environment. In cases where there are a high proportion of values below limits of detection, the permittee may demonstrate that an alternative procedure is more appropriate; and

4.11.1.h.D. The statistical procedure used must account for seasonal and spatial variability and temporal correlation.

4.11.1.i. If contamination is detected by any of the statistical tests, and the director or permittee suspects that detection is an artifact caused by some feature of the data other than contamination, the director may

specify that statistical tests of trend, seasonal variation, autocorrelation, or other interfering aspects of the data be done to establish whether the significant result is indicative of detection of contamination or resulted from natural variation.

4.11.1.i.A. The permittee must determine whether there is a statistically significant increase (or decrease, in the case of Phase I) over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the landfill, as determined under section 4.11.2.a or 4.11.3.a of this rule. The permittee must make these statistical determinations each time he or she assesses groundwater quality at the landfill.

4.11.1.i.B. In determining whether a statistically significant increase or decrease has occurred, the permittee must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to section 3.8.4.a.J to the background value of that parameter or constituent, according to the statistical procedures specified under section 4.11 of this rule.

4.11.1.i.C. Within a reasonable time period after completing sampling and analysis as determined by the director, the permittee must determine whether there has been a statistically significant increase over background at each monitoring well.

4.11.1.i.D. Any statistical method chosen under section 4.11.1.g must comply with the following performance standards, as appropriate:

4.11.1.i.D.(a) The statistical method used to evaluate groundwater monitoring data must be appropriate for the distribution of chemical parameters or hazardous constituents.

4.11.1.i.D.(b) If the distribution of the chemical parameters or hazardous constituents is shown by the permittee to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used.

4.11.1.i.D.(c) If the distributions for the constituents differ, more than one statistical method may be needed.

4.11.1.i.E. If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test must be done at a Type I error level no less than 0.01 for each testing period.

4.11.1.i.E.(a) If a multiple comparisons procedure is used, the Type I experiment wise error rate for each testing period must be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained.

4.11.1.i.E.(b) This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

4.11.1.i.F. If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values must be protective of human health and the environment.

4.11.1.i.F.(a) The parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

4.11.1.i.G. If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, and must be protective of human health and the environment.

4.11.1.i.G.(a) These parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

4.11.1.i.H. The statistical method must account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment.

4.11.1.i.H.(a) Any practical quantitation limit (pql) that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility, as must a concentration level less than the mcl referenced in Appendix III to this rule.

4.11.1.i.I. If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

4.11.1.j. Once established at a SWLF, groundwater monitoring must be conducted throughout the active life and post-closure care period of that SWLF as specified in section 6 of this rule.

4.11.1.k. The permittee may request the director to establish an alternative schedule(s) for demonstrating compliance with section 3.8.4, pertaining to notification of placement of certification in the operating record; section 4.11.2, pertaining to notification that statistically significant increase (SSI) notice is in the operating record; section 4.11.2 and 4.11.3.b, pertaining to an assessment monitoring program; section 4.11.3, pertaining to sampling and analyzing Appendix II constituents; section 4.11.3.d.B, pertaining to placement of notice (Appendix II constituents detected) in the operating record and notification of notice in the operating record; section 4.11.3.g, pertaining to sampling for Appendix I and II to this part; section 4.11.3.g, pertaining to notification (and placement of notice in operating record) of SSI above groundwater protection standard; sections 4.11.5 and 4.11.6, pertaining to assessment of corrective measures; section 4.11.7, pertaining to selection of remedy and notification of placement in the operating record; section 4.11.7, pertaining to notification of placement in

the operating record (alternative corrective action measures); and section 4.11.7, pertaining to notification of placement in the operating record (certification of remedy completed).

#### **4.11.2. Phase I Detection Monitoring Program.**

**4.11.2.a. Program Requirements.** A Phase I Detection Monitoring Program is required for all groundwater monitoring wells at all landfills and solid waste disposal surface impoundments except as otherwise provided in this rule and in section 4.11.3 of this rule.

**4.11.2.b.** At a minimum, a Phase I detection monitoring program for commercial solid waste facilities shall include the monitoring parameters listed in Appendix I, or as specified in the facility permit, or order of the director. For Class F solid waste facilities, the chief shall specify in the permit those parameters to be included in a Phase I monitoring program as appropriate for the types of waste to be disposed in a particular solid waste facility or which are reasonably expected to be present. Such proposed monitoring parameters shall be submitted to the chief as part of the permit application process. For coal combustion by-product facilities, the monitoring parameters shall consist of some combination of the following: pH, temperature, alkalinity, hardness, total dissolved solids, total suspended solids, specific conductance, total organic carbon, calcium, magnesium, sodium, iron, manganese, aluminum, chloride, sulfate, arsenic, copper, nickel, selenium, zinc, barium, mercury, total and hexavalent chromium, lead, boron, molybdenum, cadmium, and vanadium.

**4.11.2.b.A.** The director may delete any of the Appendix I monitoring parameters for a SWLF if it can be shown that the removed constituents are not reasonably expected to be contained in or derived from the waste contained in the SWLF.

**4.11.2.b.B.** The director may establish an alternative list of inorganic indicator parameters for a SWLF, in lieu of some or all of the heavy metals (constituents in Appendix I to this rule), if the alternative parameters provide a reliable indication of inorganic releases from the SWLF to the groundwater.

**4.11.2.b.B.(a).** In determining alternative parameters, the director may consider the following factors:

**4.11.2.b.B.(a)(A)** The types, quantities, and concentrations of constituents in waste managed at the SWLF;

**4.11.2.b.B.(a)(B)** The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the SWLF;

**4.11.2.b.B.(a)(C)** The detectability of indicator parameters, waste constituents, and reaction products in the groundwater; and

**4.11.2.b.B.(a)(D)** The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.

#### 4.11.2.c. Phase I Sampling and Analysis Procedures.

4.11.2.c.A. The monitoring frequency for all constituents listed in Appendix I of this rule, must be at least twice a year during the active life of the facility, including closure and the post-closure periods. The director may require more frequent monitoring on a site-specific basis by considering aquifer flow rate and existing quality of the groundwater.

4.11.2.c.B. A minimum of four independent samples from each well (background and downgradient) must be collected and analyzed in accordance with section 4.11.2.b.B, during the first semi-annual sampling event.

4.11.2.c.C. At least one sample from each well (background and downgradient) must be collected and analyzed during subsequent semi-annual sampling events.

4.11.2.c.D. The director may specify an appropriate alternative frequency for repeated sampling and analysis for Appendix I constituents, or the alternative list approved in accordance with section 4.11.2.b.B, during the active life (including closure) and the post-closure care period.

4.11.2.c.E. The alternative frequency during the active life (including closure) must be no less than annual.

4.11.2.c.F. The alternative frequency must be based on consideration of the following factors:

4.11.2.c.F.(a) Lithology of the aquifer and unsaturated zone;

4.11.2.c.F.(b) Hydraulic conductivity of the aquifer and unsaturated zone;

4.11.2.c.F.(c) Groundwater flow rates;

4.11.2.c.F.(d) Minimum distance between upgradient edge of the SWLF and downgradient monitoring well screen (minimum distance of travel); and

4.11.2.c.F.(e) Resource value of the aquifer.

4.11.2.d. Unless otherwise directed by the director, if the permittee determines, pursuant to this rule, that there is a statistically significant increase over background for one or more of the constituents listed in Appendix I to this rule, or in the alternative list approved in accordance with section 4.11.2.b.B, Phase I parameter at the boundary specified under sections 3.8.4.a.J, the permittee must:

4.11.2.d.A. Within 14 days of this finding, place a notice in the operating record indicating which constituents have shown statistically significant changes from background levels, and notify the director that this notice was placed in the operating record;

4.11.2.d.B. Within a thirty-day period, repeat the sampling of the groundwater in all appropriate monitoring wells as approved by the director, and determine the concentration of all constituents designated under

section 4.11.2.b of this rule that are present in the groundwater; and

4.11.2.d.C. If the repeat sampling indicates that no statistically significant increase over background levels has occurred, continue monitoring at the Phase I level; or

4.11.2.d.D. If the repeat sampling confirms that a statistically significant increase over background levels has occurred, establish a Phase II assessment monitoring program meeting the requirements of section 4.11.3 of these regulations within ninety 90 days of confirmation, except as provided for in section 4.11.2.e.

**4.11.2.e. Other Source Determination.**

4.11.2.e.A. The permittee may demonstrate that a source other than a SWLF caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration must be certified by a qualified groundwater scientist approved by the director and be placed in the operating record.

4.11.2.e.B. If the director agrees that a successful demonstration has been made and documented, the permittee may continue Phase I Detection Monitoring as specified in this section.

4.11.2.e.C. If, after 90 days, a successful demonstration has not been made, the permittee must initiate a Phase II Assessment Monitoring Program as required in section 4.11.3.

**4.11.3. Phase II Assessment Monitoring Program.**

4.11.3.a. A Phase II assessment monitoring program is required whenever statistically significant increases over background have been detected between background and downgradient monitoring wells for one or more constituent listed in Appendix I or in the alternative list approved by the director in accordance with section 4.11.2.b.B.

**4.11.3.b. Phase II Sampling and Analysis Procedures.**

A Phase II monitoring program must include quarterly monitoring of all constituents identified in Appendix II of this rule in addition to specified Phase I parameters, or in the case of Class F solid waste facilities, those specified by the director unless waived by the director upon request of the permittee.

4.11.3.b.A. Within 90 days of triggering an assessment monitoring program, and annually thereafter, the permittee must sample and analyze the groundwater for all constituents identified in Appendix II of this rule.

4.11.3.b.B. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event.

4.11.3.b.C. For any constituent detected in the downgradient wells as the result of the complete Appendix II analysis, a minimum of four

independent samples from each well (background and downgradient) must be collected and analyzed to establish background for new constituents.

4.11.3.b.D. The director may specify an appropriate subset of wells to be sampled and analyzed for Phase II constituents during assessment monitoring.

4.11.3.b.E. The director may delete any of the Phase II monitoring parameters for a SWLF if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste contained in the SWLF.

4.11.3.b.F. For those Phase II constituents that are determined to be below the detectable limits of the standard analytical methods, the director may reduce the required monitoring frequency. In no case may the monitoring frequency be less than once per year.

4.11.3.b.G. If the permittee finds no Phase II constituent in groundwater during the initial sampling made pursuant to a Phase II assessment monitoring program, the permittee may petition the director for a reinstatement of the Phase I monitoring program. Within ninety (90) days of the receipt of such a petition, the director may either approve or deny the petition and notify the permittee of the decision in writing.

4.11.3.c. The director may specify an appropriate alternative frequency for repeated sampling and analysis for the full set of Appendix II constituents required by section 4.11.3.b of this rule, during the active life (including closure) and post-closure care of the SWLF considering the following factors:

4.11.3.c.A. Lithology of the aquifer and unsaturated zone;

4.11.3.c.B. Hydraulic conductivity of the aquifer and unsaturated zone;

4.11.3.c.C. Groundwater flow rates;

4.11.3.c.D. Minimum distance between upgradient edge of the SWLF and downgradient monitoring well screen (minimum distance of travel);

4.11.3.c.E. Resource value of the aquifer; and

4.11.3.c.F. Nature (fate and transport) of any constituents detected in response to this section.

4.11.3.d. After obtaining the results from the initial or subsequent sampling events required in section 4.11.3.b, the permittee must, within 14 days, place a notice in the operating record identifying the Phase II constituents that have been detected and notify the director that this notice has been placed in the operating record;

4.11.3.d.B. Required Permittee Resampling Procedures for Phase II Events.



4.11.3.d.B.(a) Within 90 days, and on at least a semiannual basis thereafter, resample all wells specified by section 3.8.4, the permittee must conduct analyses for all constituents in Appendix I to this rule or in the alternative list approved in accordance with section 4.11.2 and for those constituents in Appendix II to this rule that are detected in response to section 4.11.2.c, and record their concentrations in the facility operating record.

4.11.3.d.B.(b) At least one sample of each well (background and downgradient) must be collected and analyzed during these sampling events.

4.11.3.d.B.(c) The director may specify an alternative monitoring frequency during the active life (including closure) and post-closure period for the constituents referred to in this section.

4.11.3.d.B.(d) The alternative frequency for Appendix I constituents, or the alternative list approved in accordance with section 4.11.2.b.B, during the active life (including closure) must be no less than annual.

4.11.3.d.B.(e) The alternative frequency must be based on consideration of the factors specified in section 4.11.3.c;

4.11.3.d.C. Establish background concentrations for any constituents detected pursuant to section 4.11.3.b or 4.11.3.d; and

4.11.3.d.D. Groundwater Protection Standards.

4.11.3.d.D.(a) Establish groundwater protection standards for all constituents detected pursuant to section 4.11.3.b or 4.11.3.d.

4.11.3.d.D.(b) The groundwater protection standards must be established in accordance with section 4.11.3.h or 4.11.3.i.

4.11.3.e. If the concentrations of all Appendix II constituents are shown to be at or below background values, using the statistical procedures in sections 4.11.1.g and 4.11.1.h of this rule, for two consecutive sampling events, the permittee must notify the director of this finding and may return to Phase I detection monitoring.

4.11.3.f. If the concentrations of any Appendix II constituents are above background values, but all concentrations are below the groundwater protection standard established under section 4.11.3.h, or 4.11.3.i, using the statistical procedures in sections 4.11.1.g and 4.11.1.h of this rule, the permittee must continue assessment monitoring in accordance with this section.

4.11.3.g. Statistically Significant Level Above Groundwater Protection Standards.

4.11.3.g.A. If one or more Appendix II constituents are detected at statistically significant levels above groundwater protection standard established under section 4.11.3.h, or 4.11.3.i, in any sampling event, the permittee must, within 14 days of this finding, place a notice in the operating record identifying the Appendix II constituents that have exceeded

the groundwater protection standard and notify the director and all appropriate local government officials that the notice has been placed in the operating record. The permittee must also:

**4.11.3.g.A.(a)** Characterize the nature and extent of the release by installing additional monitoring wells as necessary;

**4.11.3.g.A.(b)** Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with section 4.11.3.d.B;

**4.11.3.g.A.(c)** Notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with section 4.11.3.g; and

**4.11.3.g.A.(d)** Initiate an assessment of corrective measures as required by section 4.11.5 of this rule within 90 days; or

**4.11.3.g.B. Other Source of Statistically Significant Increase (SSI) Determination.**

**4.11.3.g.B.(a)** The permittee may demonstrate that a source other than a SWLF caused the contamination, or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

**4.11.3.g.B.(b)** A report documenting this demonstration must be certified by a qualified groundwater scientist and approved by the director of an approved state and placed in the operating record.

**4.11.3.g.B.(c)** If the director agrees that a successful demonstration has been made the permittee must continue monitoring in accordance with the assessment (Phase II) monitoring program pursuant to section 4.11.3, and may return to Phase I detection monitoring if the Phase II constituents upon resampling are at or below background as specified in section 4.11.3.e.

**4.11.3.g.B.(d)** Until the director agrees that a successful demonstration has been made, the permittee must continue to comply with section 4.11.3.g including initiating an assessment of corrective measures.

**4.11.3.h. Establishment of Groundwater Protection Standards.**

**4.11.3.h.A.** The permittee must establish a groundwater protection standard for each Appendix II constituent detected in the groundwater.

**4.11.3.h.B.** The groundwater protection standard must be as follows:

**4.11.3.h.B.(a)** For constituents for which a maximum contaminant level (MCL) has been promulgated under section 1412 of the Safe Drinking Water Act (codified) under 40 CFR Part 141, or 46 CSR 12, the MCL for that constituent;

**4.11.3.h.B.(b)** For constituents for which MCLs have not been promulgated, the background concentration for the constituent established from wells in accordance with section 3.8.4; or

**4.11.3.h.B.(c)** For constituents for which the background level is higher than the MCL identified under section 4.11.3.h, or health-based levels, identified under section 4.11.3.i, the background concentration.

**4.11.3.i. Alternative Groundwater Protection Standards.**

**4.11.3.i.A.** The director may consider an alternative groundwater protection standard in consultation with the environmental water quality board pursuant to 47 CSR 57 for constituents for which water quality standards have not been established.

**4.11.3.i.B.** These groundwater protection standards must be appropriate health-based levels that satisfy the following criteria:

**4.11.3.i.C.** The level is derived in a manner consistent with EPA guidelines for assessing the health risks of environmental pollutants (51 CFR 33992, 34006, 34014, 34028, September 24, 1986);

**4.11.3.i.D.** The level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act, Good Laboratory Practice Standards (40 CFR Part 792) or equivalent;

**4.11.3.i.E.** For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level (due to continuous lifetime exposure) with the  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$  range; and

**4.11.3.i.F. Systemic Toxicants.**

**4.11.3.i.F.(a)** For systemic toxicants, the level represents a concentration to which the human population (including sensitive subgroups) could be exposed to on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime.

**4.11.3.i.F.(b)** For purposes of this section, systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

**4.11.3.j.** In establishing groundwater protection standards under section 4.11.3.i., the director may consider the following:

**4.11.3.j.A.** Multiple contaminants in the groundwater;

**4.11.3.j.B.** Exposure threats to sensitive environmental receptors; and

**4.11.3.j.C.** Other site-specific exposure or potential exposure to groundwater.

**4.11.4. (Reserved)**

#### 4.11.5. Assessment of Corrective Measures.

Whenever a statistically significant increase is found in a Phase II monitoring parameter, or when groundwater contamination is otherwise identified by the director at sites without monitoring programs, which is determined by the director to have resulted in a significant adverse effect on an aquifer, and which is attributable to a solid waste facility, the director may require appropriate corrective or remedial action pursuant to WV Code Chapter 22, Articles 11 and 12, and Chapter 22, Article 15 to abate, remediate or correct such pollution. Any such corrective or remedial action order must take into account any applicable groundwater quality protection standards and/or background groundwater quality, pursuant to the requirements of the Groundwater Protection Act, WVC Chapter 22, Article 15, section 1 et seq., the existing use of such waters, the reasonable uses of such waters, background water quality, and the protection of human health and the environment.

4.11.5.a. Within 90 days of finding that any of the constituents listed in Appendix II have been detected at a statistically significant level exceeding the groundwater protection standards defined under section 4.11.3.h or 4.11.3.i of this rule, the permittee must initiate an assessment of corrective measures.

4.11.5.a.A. Such an assessment must be completed within a period of time as agreed to in writing by the director.

4.11.5.b. The permittee must continue to monitor in accordance with the assessment monitoring program as specified in section 4.11.3.

4.11.5.c. The assessment must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under section 4.11.6, addressing at least the following:

4.11.5.c.A. The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;

4.11.5.c.B. The time required to begin and complete the remedy;

4.11.5.c.C. The costs of remedy implementation; and

4.11.5.c.D. The institutional requirements such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy(ies).

4.11.5.d. The permittee must discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties.

#### 4.11.6. Selection of Remedy.

4.11.6.a. Based on the results of the corrective measures assessment conducted under section 4.11.5 the permittee must select a remedy that, at a

minimum, meets the standards listed in section 4.11.6.b.

**4.11.6.a.A.** The permittee must notify the director, within 14 days of selecting a remedy, a report describing the selected remedy has been placed in the operating record and how it meets the standards in section 4.11.6.b.

**4.11.6.b.** Remedies must:

**4.11.6.b.A.** Be protective of human health and the environment and maintain existing groundwater quality, pursuant to the requirements of the Groundwater Protection Act, W. Va. Code §22-12-1 et seq.;

**4.11.6.b.B.** Attain the groundwater protection standard as specified pursuant to sections 4.11.3.h or 4.11.3.i;

**4.11.6.b.C.** Control the source(s) of releases so as to reduce or eliminate further releases of Appendix II constituents into the environment; and

**4.11.6.b.D.** Comply with standards for management of wastes as specified in section 4.11.7.d.

**4.11.6.c.** In selecting a remedy that meets the standards of section 4.11.6.b, the permittee must consider the following evaluation factors:

**4.11.6.c.A.** The long and short-term effectiveness and protectiveness of the potential remedy(ies), along with the degree of certainty that the remedy(ies) will prove successful based on consideration of the following:

**4.11.6.c.A.(a)** Magnitude of reduction of existing risks;

**4.11.6.c.A.(b)** Magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;

**4.11.6.c.A.(c)** The type and degree of long-term management required, including monitoring, operation, and maintenance;

**4.11.6.c.A.(d)** Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and re-disposal of containment;

**4.11.6.c.A.(e)** Time until full protection is achieved;

**4.11.6.c.A.(f)** Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment;

**4.11.6.c.A.(g)** Long-term reliability of the engineering and institutional controls; and

**4.11.6.c.A.(h)** Potential need for replacement of the remedy.

4.11.6.c.B. The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:

4.11.6.c.B.(a) The extent to which containment practices will reduce further releases;

4.11.6.c.B.(b) The extent to which treatment technologies may be used;

4.11.6.c.C. The ease or difficulty of implementing a potential remedy(ies) based upon consideration of the following types of factors:

4.11.6.c.C.(a) Degree of difficulty associated with constructing the technology;

4.11.6.c.C.(b) Expected operational reliability of the technologies;

4.11.6.c.C.(c) Need to coordinate with and obtain necessary approvals and permits from other agencies;

4.11.6.c.C.(d) Availability of necessary equipment and specialists; and

4.11.6.c.C.(e) Available capacity and location of needed treatment, storage, and disposal services.

4.11.6.c.D. Practicable capability of the permittee, including a consideration of the technical and economic capability.

4.11.6.c.E. The degree to which community concerns are addressed by a potential remedy(ies).

4.11.6.d. The permittee must specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities.

4.11.6.d.A. Such a schedule must require the initiation of remedial activities within period of time agreed to in writing by the director, taking into consideration the factors set forth in section 4.11.6.d.

4.11.6.d.B. The permittee must consider the following factors in determining the schedule of remedial activities:

4.11.6.d.B.(a) Extent and nature of contamination;

4.11.6.d.B.(b) Practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under sections 4.11.3.g or 4.11.3.h and other objectives of the remedy;

4.11.6.d.B.(c) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;

4.11.6.d.B.(d) Desirability of utilizing technologies that are

not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;

4.11.6.d.B.(e) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;

4.11.6.d.B.(f) The hydrogeologic characteristics of the facility and the surrounding land, and aquifer including:

4.11.6.d.B.(f)(A) Current and future uses;

4.11.6.d.B.(f)(B) Proximity and withdrawal rate of users;

4.11.6.d.B.(f)(C) Groundwater quantity and quality;

4.11.6.d.B.(f)(D) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituent(s);

4.11.6.d.B.(f)(E) Groundwater removal and treatment costs;  
and

4.11.6.d.B.(f)(F) The cost and availability of alternative water supplies.

4.11.6.d.B.(g) Practicable capability of the permittee.

4.11.6.d.B.(h) Other relevant factors.

4.11.6.e. The director may determine that remediation of a release of an Appendix II constituent from a SWLF is not necessary if the permittee demonstrates to the satisfaction of the director that:

4.11.6.e.A. The groundwater is additionally contaminated by substances that have originated from a source other than a SWLF and those substances are present in concentrations such that cleanup of the release from the SWLF would provide no significant reduction in risk to actual or potential receptors; or

4.11.6.e.B. The constituent(s) is present in groundwater that:

4.11.6.e.B.(a) Is not currently or reasonably expected to be a source of drinking water; and

4.11.6.e.B.(b) Is not hydraulically connected with waters to which the hazardous constituents are migrating or are likely to migrate in a concentration(s) that would exceed the groundwater protection standards established under section 4.11.3.h or 4.11.3.i; or

4.11.6.e.C. Remediation of the release(s) is technically impracticable; or

4.11.6.e.D. Remediation results in unacceptable cross-media



impacts.

4.11.6.f. A determination by the director pursuant to section 4.11.6.e. must not affect the authority of the state to require the permittee to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

**4.11.7. Implementation of the Corrective Action Program.**

4.11.7.a. Based on the schedule established under section 4.11.6.d for initiation and completion of remedial activities the permittee must:

4.11.7.a.A. Establish and implement a corrective action groundwater monitoring program that:

4.11.7.a.A.(a) At a minimum, meet the requirements of an assessment monitoring program under section 4.11.3;

4.11.7.a.A.(b) Indicate the effectiveness of the corrective action remedy; and

4.11.7.a.A.(c) Demonstrate compliance with the Groundwater Protection Act, WVC §22-12-1 et sec., and/or the groundwater standard pursuant to section 4.11.7.e.

4.11.7.a.B. Implement the corrective action remedy selected under section 4.11.6; and

4.11.7.a.C. Take any interim measures necessary to ensure the protection of human health and the environment.

4.11.7.a.C.(a) Interim measures must, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to section 4.11.6.

4.11.7.a.C.(b) The following factors must be considered by a permittee in determining whether interim measures are necessary:

4.11.7.a.C.(b)(A) Time required to develop and implement a final remedy;

4.11.7.a.C.(b)(B) Actual or potential exposure of nearby populations or environmental receptors to hazardous constituents;

4.11.7.a.C.(b)(C) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

4.11.7.a.C.(b)(D) Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;

4.11.7.a.C.(b)(E) Weather conditions that may cause

hazardous constituents to migrate or be released;

4.11.7.a.C.(b)(F) Risks of fire or explosion, or potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system; and

4.11.7.a.C.(b)(G) Other situations that may pose threats to human health and the environment.

4.11.7.b. A permittee may determine, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of section 4.11.6.b are not being achieved through the remedy selected.

4.11.7.b.A. In such cases, the permittee must implement other methods or techniques that could practicably achieve compliance with the requirements, unless the permittee makes the determination under section 4.11.7.c.

4.11.7.c. If the permittee determines that compliance with requirements under section 4.11.6.b of this rule cannot be practically achieved with any currently available methods, the permittee must:

4.11.7.c.A. Obtain certification of a qualified groundwater scientist and approval by director that compliance with requirements under section 4.11.6.b cannot be practically achieved with any currently available methods;

4.11.7.c.B. Implement alternative measures to control exposure of humans or the environment to residual contamination, as necessary to protect human health and the environment; and

4.11.7.c.C. Implement alternative measures for control of the sources of contamination, or for removal or decontamination of equipment, units, devices, or structures that are:

4.11.7.c.C.(a) Technically practicable; and

4.11.7.c.C.(b) Consistent with the overall objective of the remedy.

4.11.7.c.D. Notify the director within 14 days that a report justifying the alternative measures prior to implementing the alternative measures has been placed in the operating record.

4.11.7.d. All solid wastes that are managed pursuant to a remedy required under section 4.11.6, or an interim measure required under section 4.11.7.a.C must be managed in a manner:

4.11.7.d.A. That is protective of human health and the environment; and

4.11.7.d.B. That complies with applicable RCRA requirements.

4.11.7.e. Remedies selected pursuant to section 4.11.6 must be considered complete when:

4.11.7.e.A. The permittee complies with the groundwater protection standards established under sections 4.11.3.h or 4.11.3.i at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under section 3.8.4 and 3.8.4.a.

4.11.7.e.B. Compliance with the groundwater protection standards established under section 4.11.3.h or 4.11.3.i have been achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in sections 4.11.1.g and 4.11.1.h of this rule.

4.11.7.e.B.(a) The director may specify an alternative length of time during which the permittee must demonstrate that concentrations of Appendix II constituents have not exceeded the groundwater protection standard(s) taking into consideration:

4.11.7.e.B.(a) (A) Extent and concentration of the release(s);

4.11.7.e.B.(a) (B) Behavior characteristics of the hazardous constituents in the groundwater;

4.11.7.e.B.(a) (C) Accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and

4.11.7.e.B.(a) (D) Characteristics of the groundwater.

4.11.7.e.C. All actions required to complete the remedy have been satisfied.

4.11.7.f. Upon completion of the remedy, the permittee must notify the director within 14 days that a certification that the remedy has been completed in compliance with the requirements of section 4.11.7.e has been placed in the operating record.

4.11.7.f.A. The certification must be signed by the permittee and by a qualified groundwater scientist and approved by the director.

4.11.7.g. When, upon completion of the certification, the director determines that the corrective action remedy has been completed in accordance with the requirements under section 4.11.7.e, the permittee must be released from the requirements for financial assurance for corrective action under section 3.13.2.a.A.(c).

#### 4.12. Reporting.

##### 4.12.1. Daily Logs.

Accurate, complete and true daily logs must be kept by the operator

describing the type, amount, and origin of all solid waste received at the solid waste facility. These daily logs must be kept on file at the facility and include:

4.12.1.a. A description of waste handling problems or emergency disposal activities;

4.12.1.b. A record of deviations from the approved design or operational plans; and

4.12.1.c. A record of actions taken to correct violations of the Act, other state Acts, and the division's rules and regulations.

**4.12.2. Tonnage and Monitoring Reports.**

**4.12.2.a. Monthly Solid Waste Tonnage Reports.**

4.12.2.a.A. Monthly solid waste tonnage reports describing the type, amount, and origin received at the solid waste facility for the month must be submitted to the director before the twentieth day of the following month.

4.12.2.a.B. The monthly tonnage report must also include results of the hazardous waste exclusion efforts as required by section 4.6.1.a.F of this rule.

**4.12.2.b. Groundwater Monitoring Reports.**

4.12.2.b.A. The groundwater sampling analysis monitoring reports and accompanying report of determining whether there was a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined for Phase I and Phase II monitoring programs, as required in section 4.11 of this rule must be submitted with the monthly solid waste reports due before the twentieth day of April, July, October, and January.

**4.12.2.c. Surface Water Monitoring Reports.**

The surface water sampling analysis monitoring reports must be submitted as required by §22-11 and the rules promulgated thereunder.

**4.12.2.c. Leachate Monitoring Reports.**

The leachate sampling analysis monitoring reports must be submitted as required by §22-11 and the rules promulgated thereunder.

**4.12.2.d. Reporting and Recordkeeping.**

A copy of the monthly tonnage and the monitoring reports must also be sent to the county or regional solid waste authority for the county or counties in which the solid waste originated from. Copies of all of the reports required by this section must be kept on file at the solid waste facility.

#### 4.12.3. Annual Operational Report.

An annual solid waste facility operational report must be submitted for the current calendar year to the director before January 31 of the following year.

##### 4.12.3.a. The report must include:

4.12.3.a.A. Updated list of users of the facility;

4.12.3.a.B. Summary of the daily logs of solid waste received during the previous year;

4.12.3.a.C. Summary of the previous year's surface and groundwater monitoring activities; and

4.12.3.a.D. A brief narrative describing the status of development, construction, maintenance, expansion, and closure of all facilities or portion of facilities that are a part of the approved solid waste facility.

4.12.3.b. The annual solid waste facility operational report for landfills must also include:

4.12.3.b.A. A topographic map showing the permitted area, location of current working areas and completed areas in relationship to the grid system of the solid waste sequencing plan;

4.12.3.b.B. Cross-sections of the area that has been filled; and

4.12.3.b.C. Computations estimating the volume of the area that has been filled, and the volume of the remaining useful life of the facility, in months.

#### 4.13. Acceptance and Handling of Special Solid Wastes.

##### 4.13.1. General.

4.13.1.a. Except as expressly specified by an order or other written approval by the director, a solid waste facility may receive only those solid wastes allowed by its permit. Facilities may receive solid waste that requires special handling methods for processing or disposal only with express written approval of the director, or by specific provisions within the facility permit. If it is not clear that a particular waste is within the authorized wastes that a permitted facility may receive, the permittee must request and receive a letter of permission from the director before receiving the waste.

4.13.1.b. Nothing must limit or affect the power of the director to prohibit or require special handling requirements determined to be necessary to protect the environment or the health, safety, and welfare of the public.

4.13.1.c. Special wastes such as discarded chemicals and pesticides not regulated as hazardous wastes, oil spill cleanup, underground storage site

residues from cleanup, properly treated pesticide containers, and contaminated food products and fabrics requiring supervised disposal are examples of the type of special wastes for which approval by the director would be required before permitted solid waste management facilities could receive and dispose of the products.

**4.13.1.c.A.** Any analytical laboratory performing services for a special waste generator or a contractor under his or her employ must not profit from the treatment, removal or disposal of such waste, and must sign an affidavit stating such facts on a form provided by the director.

**4.13.1.c.B.** The permittee must provide a waste profile/chain of custody document to the director when requesting approval to dispose of any special waste at his/her commercial solid waste facility on forms provided by the director. Any solid waste landfill which is granted approval to accept special waste for disposal, such as petroleum contaminated soil for example must, at a minimum, maintain on-site at the facility a HNU Photoionizer, or equivalent, to monitor the levels of total organic volatiles (TOVs) present in soil being aerated to ensure that total TOVs are less than one hundred parts per million (100 ppm) prior to disposal of waste soil in the landfill or for use of the soil as daily cover.

**Note:** The use of any trade name does not imply endorsement by the West Virginia Division of Environmental Protection.

**4.13.2. Asbestos Wastes.**

The permittee must ensure that every individual involved in the management of wastes is protected from exposure in conformance with the provisions of this rule and other applicable state and federal statutes, rules and regulations.

**4.13.2.a. Packaging of Friable and Nonfriable Category II Asbestos Materials.**

All solid wastes that may contain friable or nonfriable category II asbestos must be placed in double plastic bags and sealed or encased in two sealed layers of plastic wrap. Each bag or layer must be six (6) mils thick or greater and boldly marked "CAUTION: CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD." The name and address of the generator must also be marked on the container. Use of sealed cardboard containers or fiber drums may be required for dense waste or as extra protection against breaking of bags. Other special handling or packaging methods may be approved where equal environmental protection is, or will be achieved. Such alternative methods must only be considered where bagging, wrapping, or packaging is proven not to be possible.

**4.13.2.b. Transportation of Friable Asbestos Materials for Disposal.**

Properly packaged asbestos wastes must be transported in a closed conveyance with the crew segregated from the load. Asbestos waste must be accompanied by appropriate shipping papers to identify the waste, its origin, and its destination.

#### 4.13.2.c. Disposal of Friable and Nonfriable Asbestos Materials.

Asbestos waste must be disposed in a special purpose landfill or in a special area of a landfill, and must meet the following conditions:

4.13.2.c.A. Asbestos waste must be placed in a lined area designed and constructed to meet the minimum liner requirements set forth in section 5.4.2 of this rule.

4.13.2.c.B. Asbestos waste must be hand placed in the trench or cell or by other means approved by the director which ensure integrity of bags, wrappings, or containers.

4.13.2.c.C. Asbestos waste must not be compacted until a sealing layer of soil has been placed over the waste and precautions are taken to prevent the breaking of bags or wrapping. All accidentally broken materials must be covered with twelve (12) inches or more of soil immediately. A cell which has been completely covered with soil, at least one (1) foot thick, may be compacted.

4.13.2.c.D. Asbestos waste must be covered with at least one (1) foot of soil at the end of each day of operation. A final cover of three (3) feet of soil must be placed over all areas that have not been in use or will not be used for more than thirty (30) days. Areas that will not or have not been used for one (1) year, in addition to final soil cover, must be graded for erosion prevention and revegetated.

4.13.2.c.E. Any active portion of the asbestos disposal area, or area which has not received final cover and revegetation, plus a fifty-foot wide buffer zone on all sides of the area, must be fenced, or a waiver from the director must be obtained. Provided; That a natural barrier exists on the site that adequately deters access by the general public. The fence must be of the six (6) feet high chain link type with three (3) strands of barbed wire on top. The fence must completely encompass the disposal area and internal buffer zone and maintain access control through locked gates.

4.13.2.c.F. The fence must bear permanent signs every three hundred (300) feet or closer that boldly state: **"CAUTION: CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD"** in two (2) inch high or larger letters.

4.13.2.c.G. A plat of the area, surveyed and clearly marked as containing asbestos waste must be provided to the director upon request and must be contained and specifically noted in the deed notation as required by section 6.2.6 of this rule.

4.13.2.c.H. Asbestos waste must be buried below the natural ground surface of the site, or at a depth below the final grade of the landfill approved by the director, in such a manner as to maximize the prevention of wind and water erosion of the asbestos disposal area.

4.13.2.c.I. The fenced area of the asbestos disposal facility must not be located closer than fifty (50) feet to the property boundary or building or structure.



#### 4.13.2.c. Disposal of Friable and Nonfriable Asbestos Materials.

Asbestos waste must be disposed in a special purpose landfill or in a special area of a landfill, and must meet the following conditions:

4.13.2.c.A. Asbestos waste must be placed in a lined area designed and constructed to meet the minimum liner requirements set forth in section 5.4.2 of this rule.

4.13.2.c.B. Asbestos waste must be hand placed in the trench or cell or by other means approved by the director which ensure integrity of bags, wrappings, or containers.

4.13.2.c.C. Asbestos waste must not be compacted until a sealing layer of soil has been placed over the waste and precautions are taken to prevent the breaking of bags or wrapping. All accidentally broken materials must be covered with twelve (12) inches or more of soil immediately. A cell which has been completely covered with soil, at least one (1) foot thick, may be compacted.

4.13.2.c.D. Asbestos waste must be covered with at least one (1) foot of soil at the end of each day of operation. A final cover of three (3) feet of soil must be placed over all areas that have not been in use or will not be used for more than thirty (30) days. Areas that will not or have not been used for one (1) year, in addition to final soil cover, must be graded for erosion prevention and revegetated.

4.13.2.c.E. Any active portion of the asbestos disposal area, or area which has not received final cover and revegetation, plus a fifty-foot wide buffer zone on all sides of the area, must be fenced, or a waiver from the director must be obtained. Provided; That a natural barrier exists on the site that adequately deters access by the general public. The fence must be of the six (6) feet high chain link type with three (3) strands of barbed wire on top. The fence must completely encompass the disposal area and internal buffer zone and maintain access control through locked gates.

4.13.2.c.F. The fence must bear permanent signs every three hundred (300) feet or closer that boldly state: **"CAUTION: CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD"** in two (2) inch high or larger letters.

4.13.2.c.G. A plat of the area, surveyed and clearly marked as containing asbestos waste must be provided to the director upon request and must be contained and specifically noted in the deed notation as required by section 6.2.6 of this rule.

4.13.2.c.H. Asbestos waste must be buried below the natural ground surface of the site, or at a depth below the final grade of the landfill approved by the director, in such a manner as to maximize the prevention of wind and water erosion of the asbestos disposal area.

4.13.2.c.I. The fenced area of the asbestos disposal facility must not be located closer than fifty (50) feet to the property boundary or building or structure.

4.13.2.c.J. The permittee is required to maintain records for a period of three (3) years on the nature and quantity of asbestos waste and the source.

#### 4.13.3. Liquids.

Free liquids cannot be disposed of in a landfill. Free liquids and poorly-contained liquids must be absorbed on solid material before being placed in a landfill.

4.13.3.a. Permittees must not place bulk or noncontainerized liquid waste in SWLF unless:

4.13.3.a.A. The waste is household waste other than septic waste; or

4.13.3.a.B. The waste is leachate or gas condensate derived from the SWLF, whether it is a new or existing SWLF or lateral expansion, is designed with a composite liner and leachate collection system as described in section 4.5.4.a.A of this rule.

4.13.3.a.C. The Permittee must place the demonstration in the operating record and notify the director that it has been placed in the operating record.

4.13.3.b. Permittees must not place containers holding liquid waste in a SWLF unless:

4.13.3.b.A. The container is a small container similar in size to that normally found in household waste;

4.13.3.b.B. The container is designed to hold liquids for use other than storage; or

4.13.3.b.C. The waste is household waste.

#### 4.13.4. Tires.

More than one thousand (1,000) used tires shall not be stored at a facility unless the permit for the facility expressly allows such storage. Tires disposed of in a landfill must be split, cut, or shredded before disposal and must be dispersed in the workface with other solid wastes. Alternative burial not incorporating cutting or splitting at a specific facility may be approved if the method will assure that tires will not emerge.

#### 4.13.5. Drums.

Except as provided in section 4.13.5.a of this rule, drums and other bulk containers must not be disposed until emptied and crushed. Pesticide containers must be triple rinsed before disposal.

4.13.5.a. Fiber drums of asbestos which are to be disposed of in designated asbestos disposal areas in accordance with the provisions of section 4.13.2 of this rule need not be either emptied or crushed.

#### **4.13.6. Bulky Goods.**

Appliances and other bulky waste goods may be accumulated at a facility for not more than sixty (60) days prior to disposal. An alternative schedule may be approved by the director.

#### **4.13.7. Infectious Waste.**

Waste as defined in section 2 of this rule, must not be disposed of in a landfill except in accordance with section 4.7.2.f of this rule. Nonhazardous bottom ash from the incineration of infectious waste must not be considered infectious waste.

#### **4.13.8. Sewage Sludge.**

4.13.8.a. Sewage sludge disposed at a landfill must contain at least twenty percent (20%) solid by weight. This requirement may be met by adding or blending sand, sawdust, lime, leaves, soil, or other materials that have been approved by the director prior to disposal. Alternative sludge disposal methods can be utilized upon obtaining written approval from the director.

4.13.8.b. Sewage sludge may not represent more than twenty-five percent (25%) by weight of the total weight of waste disposed of at the landfill on any working day.

4.13.8.c. The division may require the landfill operator to periodically sample and analyze incoming sewage sludge.

#### **4.13.9. Shredder Fluff.**

Shredder fluff must not be disposed of in any facility unless specifically approved in writing by the director.

#### **4.13.10. Municipal Incinerator Ash.**

Ash from municipal incinerators must be disposed of on a liner system that conforms to the requirements of 47 CSR 35.

#### **4.13.11. Petroleum-Contaminated Soils.**

Soils contaminated with petroleum must be disposed of in a manner prescribed by the director.

### **§47-38-5. Other Solid Waste Facility Performance Standards.**

#### **5.1. Requirements for Incinerators.**

##### **5.1.1. General Requirements.**

5.1.1.a. The incinerator must be located, designed, and operated in accordance with section 5.1 of this rule.

5.1.1.b. Waste characterization must be performed in accordance with section 5.1 of this rule.

### 5.1.2. Location Criteria.

5.1.2.a. No person may establish, construct, operate, maintain or permit the use of property for any facility:

5.1.2.a.A. Within a 100-year floodplain; or

5.1.2.a.B. Within an area where there is a reasonable probability that the facility will cause:

5.1.2.a.B.(a) A significant adverse impact upon natural wetlands;

5.1.2.a.B.(b) A significant adverse impact upon any endangered or threatened species of animal or plant;

5.1.2.a.B.(c) A significant adverse impact upon any surface water;

5.1.2.a.B.(d) A significant adverse impact upon groundwater quality; or

5.1.2.a.B.(e) The migration and concentration of explosive gases in any facility structures, excluding any leachate collection system or gas control or recovery system components or in the soils or air at or beyond the facility property boundary in excess of twenty-five percent (25%) of the lower explosive limit for such gases at any time.

### 5.1.3. Operational Requirements.

5.1.3.a. No person may operate or maintain an incinerator except in conformance with the following minimum requirements, unless an exemption is granted by the director in writing:

5.1.3.a.A. The facility must be situated, equipped, operated, and maintained as to minimize interference with other activities in the area;

5.1.3.a.B. Adequate shelter and sanitary facilities must be available for personnel;

5.1.3.a.C. A sign must be prominently posted at the entrance to the facility which indicates the name, permit number, the hours of operation, the hours waste may be received, necessary safety precautions, and any other pertinent information;

5.1.3.a.D. All incoming solid waste must be confined to the designated storage area and no putrescible waste may be stored for more than twenty-four (24) hours;

5.1.3.a.E. Solid waste must be stored in compliance with section 4.5.7.j. of this rule;

5.1.3.a.F. Dust must be controlled in the unloading and charging areas;

5.1.3.a.G. Permanent records must be maintained including the weights of material treated, the quantity of resulting ash and residue, hours of plant operation, combustion temperatures, residence time, and other pertinent information;

5.1.3.a.H. Appropriate firefighting equipment must be available in the storage and charging areas and elsewhere as needed;

5.1.3.a.I. Arrangements must be made with local fire protection agency to provide adequate emergency firefighting forces;

5.1.3.a.J. Means of communication with emergency facilities must be provided;

5.1.3.a.K. Adequate equipment must be provided to allow cleaning after each day of operation or as may be required in order to maintain the plant in a sanitary condition;

5.1.3.a.L. The charging openings as well as all equipment throughout the plant must be provided with adequate safety equipment;

5.1.3.a.M. The facility must be designed and operated such that it will not cause a nuisance because of the emission of noxious odors, gases, contaminants, or particulate matter or exceed emission limitations established by state air pollution control rules;

5.1.3.a.N. Ash and residue must be disposed of at a solid waste facility permitted by the director to accept the material or be handled by an alternative method approved in writing by the director. Approval will be issued on a case-by-case basis after review of the information contained in reports filed pursuant to section 5.1 of this rule. Ash or residue from a facility with a design capacity of five hundred (500) pounds per hour must be placed in a monofill which must meet the design requirements of 47 CSR 35;

5.1.3.a.O. All wastewater from the facility must be discharged into a sanitary sewer or other system approved in writing by the director;

5.1.3.a.P. Upon the completion of construction of a new facility, and at least ten (10) days prior to initial operation, the director must be notified to allow inspection of the facility both prior to and during any performance test(s) and initial operation;

5.1.3.a.Q. Open burning of solid waste at the facility is prohibited;

5.1.3.a.R. No hazardous waste may be accepted for disposal;

5.1.3.a.S. An alternative disposal method, approved by the director in writing, must be used during any time that the facility is inoperative; and

5.1.3.a.T. The incoming waste must be screened to eliminate unacceptable material from entering the facility such as hazardous waste, asbestos, explosive materials, or other materials which may endanger public

health and safety.

#### **5.1.4. Waste Characterization.**

**5.1.4.a.** The owner or operator of an incinerator with a design capacity in excess of five hundred (500) pounds per hour must undertake an ash testing program as follows:

**5.1.4.a.A.** An ash testing program must be completed within sixty (60) days of construction and shake-down of the incinerator. Representative samples of both fly ash and bottom ash must be tested for physical characteristics, bulk chemical composition, analysis using the appropriate leaching test and analysis using the Toxicity Characteristic Leaching Procedure (TCLP) or other test to determine the wastes' regulatory status under federal or state hazardous waste laws. Test methods, the number of tests, detection limits, and parameters to be tested for will be specified by the director; and

**5.1.4.a.B.** A long-term ash testing program must be established. For the first year of operation, quarterly testing of at least one (1) sample of bottom ash and one (1) sample of fly ash must be performed using approved methods and procedures. Thereafter, annual sampling and testing must be performed. The director may specify an alternative testing program.

**5.1.4.b.** The owner or operator of a facility with a design capacity of five hundred (500) pounds per hour or less may be required to undertake the testing program described in section 5.1.4.a of this rule if the director determines through an examination of information required in section 5.1.3.a. of this rule that such testing is warranted.

#### **5.2. Requirements for Transfer Stations.**

##### **5.2.1. General.**

**5.2.1.a.** No person may conduct transfer station activities unless the director has first issued a permit for the activities in accordance with the requirements of this rule.

**5.2.1.b.** No person conducting transfer station activities may allow ash, residue, or other waste specified in section 4.13 of this rule to be received or handled at a transfer station unless the director has specifically approved handling that waste by the permit.

**5.2.1.c.** No person conducting transfer station activities may:

**5.2.1.c.A.** Mix solid waste with, or store solid waste in such close proximity to other solid waste to create a risk of fire or explosion, or a risk to the accumulation of poisonous or otherwise harmful vapors or gases; or

**5.2.1.c.B.** Allow explosive waste to be processed at the facility.

**5.2.1.d.** Regulated hazardous waste may not be disposed, processed, or stored where transfer station activities are conducted.

#### 5.2.2. Location Criteria.

Transfer stations must be sited in compliance with the location requirements of sections 3.1, 3.2.3 and 3.2.5 of this rule and may not be sited within one hundred feet (100) of a perennial stream.

#### 5.2.3. Signs.

A person conducting transfer station activities must identify the operation by posting and maintaining a sign in accordance with section 4.6.1.a.M of this rule.

#### 5.2.4. Access Control.

5.2.4.a. A gate or other barriers must be maintained at potential vehicular access points to block unauthorized access to the site when an attendant is not on duty.

5.2.4.b. The operator must construct and maintain a fence or other suitable barrier around the site sufficient to prevent unauthorized access.

5.2.4.c. Access to the site must be limited to times when an attendant is on duty.

#### 5.2.5. Access Roads.

Access roads must be designed, constructed, and maintained in accordance with section 4.5.3 of this rule.

#### 5.2.6. Measuring Waste.

Solid waste delivered to a transfer station must be accurately weighed or otherwise accurately measured prior to unloading in accordance with the provisions of 110 CSR 6A sections 4.2 and 4.3.

#### 5.2.7. Operations and Equipment.

5.2.7.a. Loading, unloading, storage, compaction and related activities must be conducted in an enclosed building, unless otherwise approved by the director.

5.2.7.b. The permittee must maintain on the site equipment necessary for operation of the facility in accordance with the permit. The equipment must be maintained in an operable condition.

5.2.7.c. Standby equipment must be located on the site or at a place where it can be available within twenty-four (24) hours. If a breakdown of the operator's equipment occurs, the operator must utilize standby equipment as necessary to comply with this rule.

5.2.7.d. Equipment must be operated and maintained so as to prevent solid waste from being unintentionally removed from the storage area.

5.2.7.e. Equipment used to handle putrescible solid waste must be



cleaned at the end of each working day.

#### **5.2.8. Unloading Area.**

5.2.8.a. The approach and unloading area must be adequate in size and design to facilitate the rapid unloading of solid waste from the collection vehicles and the unobstructed maneuvering of the vehicles and other equipment.

5.2.8.b. The loading areas and unloading areas must be constructed of impervious material which is capable of being cleaned by high pressure water spray and must be equipped with drains or sumps connected to a sanitary sewer system or treatment facility to facilitate the removal of water.

5.2.8.c. If the facility has an unloading pit, the facility must have in place truck wheel curbs and tie downs that are sufficient to prevent trucks from backing into the pit or falling into the pit while unloading.

5.2.8.d. An attendant or clearly marked signs must direct vehicles to the unloading area.

5.2.8.e. The permittee must ensure that collection vehicles unload waste promptly in unloading areas.

5.2.8.f. Solid waste must be confined to the unloading area and the approved storage areas.

#### **5.2.9. Cleaning and Maintenance.**

5.2.9.a. All areas within the building must be kept clean.

5.2.9.b. The operator must not allow putrescible waste to remain at the transfer station at the end of the day or for more than twenty-four (24) hours.

5.2.9.c. Plumbing must be properly maintained, and the floors must be well drained.

5.2.9.d. Macerators, hammer mills, and grinders must be cleanable and must be equipped with drains that connect to a sanitary sewer system or treatment facility.

5.2.9.e. Provision must be made for the routine operational maintenance of the facility.

#### **5.2.10. Water Quality Protection.**

All permit holders must meet the requirements of §22-11 and the rules promulgated thereunder.

#### **5.2.11. Other Requirements.**

5.2.11.a. The operator must also prevent and eliminate conditions not otherwise prohibited by this rule that are harmful to the environment or

public health, or which create safety hazards, odors, dust, noise, unsightliness and other public nuisances.

5.2.11.b. No person may cause or allow open burning.

5.2.11.c. The operator must prevent the attraction, harborage or breeding of vectors.

5.2.11.d. Salvaging of materials must not be conducted unless salvaging is controlled by the operator to prevent interference with prompt and sanitary operations and is conducted to prevent a health hazard or nuisance.

5.2.11.e. Salvaged materials must be promptly removed from the unloading area and either stored in an approved area or transported off-site.

5.2.11.f. The operator must not allow litter to be blown or otherwise deposited off-site.

5.2.11.g. Fences or other barriers sufficient to control blowing litter must be located in the area immediately downwind from the unloading area, unless transfer activities are conducted within an enclosed building or the solid waste being transferred cannot create blowing litter.

5.2.11.h. Litter must be collected at least weekly from fences, roadways, tree line barriers, and other barriers and disposed or stored in accordance with the Act, regulations and rules promulgated thereunder, unless a greater frequency is set forth in the permit.

5.2.11.i. A facility subject to this rule must be designed, constructed, maintained, and operated to prevent and minimize the potential for fire, explosion, or release of solid waste constituents to the air, water, or soil of this state that could threaten public health or safety, public welfare, or the environment.

5.2.11.j. The operator of a transfer station must meet all of the reporting requirements as specified in section 4.12 of this rule.

5.2.11.k. The facility must be surrounded with rapidly growing trees, shrubbery, fencing, berms, or other appropriate means to screen it from the surrounding area.

5.2.11.l. Only household waste and commercial waste must be accepted at the facility. No industrial waste, infectious waste, construction and demolition debris, or hazardous waste regulated under 47 CSR 35 must be accepted unless specifically approved by the director.

5.2.11.m. All solid waste passing through the transfer station must be ultimately treated or disposed of at a facility authorized by the division if in this state, or by the appropriate governmental agency or agencies if in other states, territories, or nations.

5.2.11.n. A transfer station with operating mechanical equipment must have an attendant on duty at all times that the facility is open.

Suitable fencing, gates, or signs must be provided.

5.2.11.o. All floors must be drained and free from standing water. All drainage from cleaning areas must be discharged to sanitary sewers or the equivalent.

5.2.11.p. Adequate storage space for incoming solid waste must be available at the transfer station.

5.2.11.q. All solid waste must be removed from the transfer station facility whenever transfer containers are full, or weekly, whichever comes first.

5.3. Requirements for Recycling Facilities. (Performance Standards Reserved).

5.4. Requirements for Construction/Demolition "Class D" Solid Waste Facilities.

5.4.1. General Requirements.

Only the construction/demolition wastes approved in the facility permit must be accepted. Putrescible, household, automobile shredder fluff, industrial and sludge wastes are prohibited.

5.4.2. Class D-1 Facility Requirements.

Class D-1 solid waste facilities must meet all of the requirements in section 4 of this rule unless an alternative standard from section 5.4.2 of this rule is met or the director has granted, upon written request, an exemption from a specific requirement of section 4 of this rule.

5.4.2.a. A liner system for a Class D-1 solid waste facility must consist of the following elements:

5.4.2.a.A. Subbase;

5.4.2.a.B. Compacted soil liner; and

5.4.2.a.C. Leachate collection and protective cover zone.

5.4.2.b. The subbase portion of the liner system must consist of a cleared and grubbed natural ground surface capable of supporting the entire liner system.

5.4.2.c. The compacted soil liner must:

5.4.2.c.A. Be a minimum compacted thickness of two (2) feet;

5.4.2.c.B. Be compacted in six (6) inch lifts;

5.4.2.c.C. Be no more permeable than  $1 \times 10^{-6}$  cm/sec based on laboratory and field testing;

5.4.2.c.D. Be free of particles greater than three (3) inches in

Suitable fencing, gates, or signs must be provided.

5.2.11.o. All floors must be drained and free from standing water. All drainage from cleaning areas must be discharged to sanitary sewers or the equivalent.

5.2.11.p. Adequate storage space for incoming solid waste must be available at the transfer station.

5.2.11.q. All solid waste must be removed from the transfer station facility whenever transfer containers are full, or weekly, whichever comes first.

### 5.3. Requirements for Recycling Facilities. (Reserved).

### 5.4. Requirements for Construction/Demolition "Class D" Solid Waste Facilities.

#### 5.4.1. General Requirements.

Only the construction/demolition wastes approved in the facility permit must be accepted. Putrescible, household, automobile shredder fluff, industrial and sludge wastes are prohibited.

#### 5.4.2. Class D-1 Facility Requirements.

Class D-1 solid waste facilities must meet all of the requirements in section 4 of this rule unless an alternative standard from section 5.4.2 of this rule is met or the director has granted, upon written request, an exemption from a specific requirement of section 4 of this rule.

5.4.2.a. A liner system for a Class D-1 solid waste facility must consist of the following elements:

5.4.2.a.A. Subbase;

5.4.2.a.B. Compacted soil liner; and

5.4.2.a.C. Leachate collection and protective cover zone.

5.4.2.b. The subbase portion of the liner system must consist of a cleared and grubbed natural ground surface capable of supporting the entire liner system.

5.4.2.c. The compacted soil liner must:

5.4.2.c.A. Be a minimum compacted thickness of two (2) feet;

5.4.2.c.B. Be compacted in six (6) inch lifts;

5.4.2.c.C. Be no more permeable than  $1 \times 10^{-6}$  cm/sec based on laboratory and field testing;

5.4.2.c.D. Be free of particles greater than three (3) inches in

any dimension;

5.4.2.c.E. Be placed without damaging the subgrade;

5.4.2.c.F. Be placed during a period of time when both the air temperature and the soil temperature are above freezing so that neither the compacted soil nor the subbase is frozen;

5.4.2.c.G. Have a slope of at least two percent (2%) to facilitate the drainage of leachate across the liner surface; and

5.4.2.c.H. Be designed, operated, and maintained so that the physical and chemical characteristics of the liner and the liner's ability to restrict the flow of solid waste, solid waste constituents, or leachate is not adversely affected by the leachate.

5.4.2.c.I. The compacted soil construction liner certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of the leachate collection and protective cover zone.

5.4.2.d. The leachate collection and protective cover zone must:

5.4.2.d.A. Create a flow zone between the compacted soil liner and solid waste more permeable than  $1 \times 10^{-3}$  cm/sec based on laboratory and field testing. The leachate collection zone including the piping system must be designed and placed on a minimum slope of two percent (2%) to facilitate efficient leachate drainage and prevent ponding on the composite liner;

5.4.2.d.B. Be at least eighteen (18) inches thick;

5.4.2.d.C. Be constructed of soil or earthen materials to ensure that the hydraulic leachate head on the composite liner does not exceed one (1) foot at the expected flow capacity from the drainage area except during storm events;

5.4.2.d.D. Be comprised of clean soil or earthen materials that contain no debris, plant material, rocks, or other solid material larger than one-quarter (1/4) inch in diameter and no material with sharp edges;

5.4.2.d.E. Be graded, uniformly compacted, and smoothed;

5.4.2.d.F. Be installed in a manner that prevents damage to the compacted soil liner; and

5.4.2.d.G. Contain a perforated piping system capable of intercepting liquid within the leachate collection zone and conveying the liquid to control collection points. The piping system must also meet the following:

5.4.2.d.G.(a) The slope sizing and spacing of the piping system must ensure that liquids drain efficiently from the leachate collection zone;

5.4.2.d.G.(b) The distance between pipes in the piping system

may not exceed one (100) hundred feet on center;

5.4.2.d.G.(c) The pipes must be installed perpendicular to the flow;

5.4.2.d.G.(d) The minimum diameter of the perforated pipe must be four (4) inches with a wall thickness of Schedule 40 or greater;

5.4.2.d.G.(e) The pipe must be capable of supporting anticipated loads without failure based on facility design;

5.4.2.d.G.(f) Rounded stones or aggregates must be placed around the pipes of the piping system. The stones or aggregates must be sized to prevent clogging of the pipes and damage to the composite liner;

5.4.2.d.G.(g) The piping system must be installed in a fashion that facilitates cleanout, maintenance, and monitoring. Manholes or cleanout risers must be located along the perimeter of the leachate detection piping system. The number and spacing of the manholes or cleanout risers must be sufficient to ensure proper maintenance of the piping system by water jet flushing or an equivalent method; and

5.4.2.d.G.(h) The leachate collection system must be cleaned and maintained as necessary.

5.4.2.d.H. The leachate collection zone construction certification and a Q.A./Q.C. report must be submitted to the director prior to the placement of solid waste.

**5.4.3. Class D Facility Requirements.** Except as herein specified, Class D solid waste facilities are exempt from the requirements of section 4 of this rule unless otherwise required by the director, but must comply with the requirements of sections 5.4.3.a through 5.4.3.g of this rule. A Class D facility other than a Class D-1 solid waste facility shall not exceed two (2) acres in size.

5.4.3.a. Access must be controlled in such a manner as to discourage unauthorized entry and must be limited to those authorized to deposit waste material and only during scheduled hours.

5.4.3.b. Construction/demolition and cover material must not be placed into a stream channel and must be placed in such a way to prevent erosion and sedimentation.

5.4.3.c. Cover material must be graded and maintained to prevent ponding and minimize erosion.

5.4.3.d. Erosion and sediment controls must be installed as necessary to prevent sedimentation.

5.4.3.e. The disturbed area must be revegetated to prevent erosion and sedimentation in accordance with section 4.5.6 of this rule.

5.4.3.f. Except when extended by the director, all operations for a

Class D solid waste facility must have been completed including covering with a minimum of twenty-four (24) inches of soil, regrading, dressing up, seeding, mulching and fertilizing prior to the expiration date of the permit.

5.4.3.g. The permittee must notify the director to arrange for a final inspection prior to removing equipment from the site. All site reclamation must be completed before equipment removal.

5.4.3.h. The director may require a Class D solid waste facility to meet any specific requirement in section 4 of this rule.

#### **5.5. Requirements for Class F Solid Waste Facilities.**

Except as provided in section 5.5 of this rule, all requirements of these regulations shall be applicable to Class F solid waste facilities.

##### **5.5.1. Waivers and Modifications.**

During the permit issuance process or upon written request or appropriate notation on the application by the permittee, the director may waive or modify the requirements of the subsections of section 3 of this rule that are listed in section 5.5.1.a of this rule and the requirements of the subsections of section 4 of this rule that are listed in section 5.5.1.b of this rule. Failure of the applicant to supply documentation requested by the director, which is necessary to justify the requested waiver or modification, are grounds for waiver or modification denial. Each request for waiver or modification of a requirement of section 3 or 4 of this rule must be based upon sound engineering judgement taking into consideration the type of waste to be disposed, the type facility, and site characteristics.

5.5.1.a. The following requirements of section 3 of this rule which may be waived or modified by the director: sections 3.4, 3.7.6.g, 3.7.10, 3.7.11, 3.7.13, 3.8.3.a.C.(d), 3.8.4.d.A, 3.10.1.f, 3.10.3, 3.13, 3.14, and 3.16.4 of this rule.

5.5.1.a.A. The requirements of sections 3.8.4.e, 3.8.9.a.B, 3.9, 3.10.1.a and 3.11.3 of this rule and the gas monitoring and control provisions of sections 3.10.1.b, 3.10.1.d, and 3.10.2.c of this rule may also be waived or modified by the director for coal combustion by-product facilities.

5.5.1.b. The following requirements of section 4 of this rule which may be waived or modified by the director for Class F facilities: sections 4.4, 4.5.2.c.A.(c), 4.5.3, 4.5.4, 4.5.7.g, 4.5.7.h, 4.5.7.i, 4.5.7.j, 4.6.2.a.B, 4.6.2.a.C, 4.6.2.b.A, 4.6.2.b.B, 4.6.2.b.D, 4.8.3.c.B, 4.10, 4.12, and 4.13.2.c of this rule.

##### **5.5.2. Requirements for Coal Combustion By-Product Facilities.**

###### **5.5.2.a. Liner System Requirements.**

Liner system requirements for coal combustion by-product landfills, solid waste disposal surface impoundments and surface impoundments, or portions thereof, placed in operation after the effective date of this rule must be as follows:



5.5.2.a.A. The liner system for landfills shall consist of eighteen (18) inches of clay, having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted in six (6) inch lifts to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698. A sixty (60) mil HDPE synthetic liner shall be installed on top of the compacted clay liner. A leachate collection system consisting of a perforated piping system embedded within an eighteen (18) inch drainage layer, which can consist of bottom ash, having a minimum permeability of  $1 \times 10^{-3}$  centimeters per second shall be installed on top of the synthetic liner. The eighteen (18) inch leachate collection system layer shall serve as the protective cover for the synthetic liner.

5.5.2.a.B. The permittee may elect and construct an alternative liner system for landfills consisting of at least two (2) feet of clay having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted in six (6) inch lifts to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698. Taking into account site-specific conditions, an appropriate groundwater interceptor drainage system, which shall also serve as a leachate detection system, shall be installed under the clay liner in such a manner as to avoid groundwater penetration of the liner system and to facilitate detection of leachate penetrating the liner. An appropriate leachate collection system, which can consist of bottom ash, having a minimum permeability of  $1 \times 10^{-3}$  centimeters per second shall be installed on top of the compacted clay liner provided that this liner system is prohibited for use in major domestic use aquifer areas, major alluvial aquifers, or karst regions.

5.5.2.a.C. Other alternative liner systems for landfills may be approved by the director on a case-by-case basis. Such alternative liner system may be more or less stringent than the liner system described in section 5.5.2.a.A of this rule as determined by sound engineering judgement taking into consideration the type of waste to be disposed, type of facility, site characteristics, operating experience of similar landfills, and protection of the groundwater.

5.5.2.a.D. Failure of an alternative liner design at the applicant's facility may result in the director disallowing the use of identical technology in new landfills proposed by the applicant unless the applicant can demonstrate a remedy for the technology's past failure.

5.5.2.a.E. The liner system for solid waste disposal surface impoundments shall be designed and constructed with a leachate detection system imbedded in a filter media having a minimum permeability of  $1 \times 10^{-3}$  centimeters per second topped by eighteen (18) inches of clay having a permeability no greater than  $1 \times 10^{-7}$  centimeters per second and compacted in six (6) inch lifts to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698, with a sixty (60) mil synthetic liner installed over the compacted clay.

5.5.2.a.F. Other alternative liner systems for solid waste disposal surface impoundments may be considered by the director on a case-by-case basis. Such determination must be based upon sound engineering judgement taking into consideration the type of waste to be disposed, type of facility, site characteristics, and groundwater monitoring results at similar existing

solid waste disposal surface impoundments.

5.5.2.a.G. For surface impoundments receiving leachate, a permittee may elect use of a liner system consisting of either eighteen (18) inches of clay having a permeability no greater than  $1 \times 10^{-9}$  centimeters per second and compacted to a Standard Proctor density of at least ninety-five percent (95%) as determined by ASTM D-698, with a sixty (60) mil synthetic liner installed on top of the clay; two (2) feet of clay with the aforementioned permeability rate and compaction density; or any other alternative liner system approved by the director on a case-by-case basis. Taking into account site-specific conditions, an appropriate groundwater interceptor drainage system, which must also serve as a leachate detection system, must be installed under all liner systems in such a manner as to avoid groundwater penetration of the liner system and to facilitate detection of leachate penetrating the liner.

5.5.2.a.H. The provisions of section 4.8.3.c.B of this rule do not apply to coal combustion by-product surface impoundments. Surface impoundments associated with a coal combustion by-product facility are not subject to any of the groundwater monitoring requirements of this rule if such impoundments are covered by the overall groundwater monitoring plan for the coal combustion by-product facility.

#### 5.5.2.b. Operating Requirements.

Operating requirements for coal combustion by-product landfills and solid waste disposal surface impoundments in operation on or closed prior to the effective date of this rule are as follows:

5.5.2.b.A. Operating landfills in existence on the effective date of this rule may remain in operation and without liner retrofit unless there is a statistically significant increase in groundwater monitoring parameters as determined by the monitoring provisions of section 4.11 of this rule. Groundwater remediation may be determined on a case-by-case basis by the director based upon an evaluation of the information from groundwater monitoring and assessment programs, as provided for in section 4.11 of this rule. Upon evidence of such contamination, a corrective action program may be required as described in section 4.11.5 of this rule. Such corrective action programs may include closure in accordance with section 6 of this rule, retrofit in accordance with section 5.5.2.a of this rule, or other appropriate remediation measures.

5.5.2.b.B. For coal combustion by-product landfills in existence on the effective date of this rule, the liner provisions of sections 5.5.2.a.A, 5.5.2.a.B, and 5.5.2.a.C of this rule and the provisions of section 4.11 of this rule do not apply to closed or closed portions of such landfills. Monitoring shall not be required for such facilities that are closed prior to the effective date of this rule except for currently-permitted closed facilities or in connection with any remedial or corrective action program ordered by the director.

5.5.2.b.C. The requirements of this rule are not applicable to coal combustion by-product disposal surface impoundments in existence on or before the effective date of this rule and which are operating under a permit

issued under W. Va. Code §22-11, except that all such impoundments shall be required to have an adequate groundwater monitoring system in place. Groundwater remediation may be determined on a case-by-case basis by the director based upon an evaluation of the information from groundwater monitoring and assessment programs. Evidence of groundwater contamination, as determined by section 4.11 of this rule, may require a corrective action program as described in section 4.11.5 of this rule.

#### **5.5.2.c. Leachate Analysis.**

The requirements of section 4.8.4 of this rule apply to coal combustion by-product landfills and surface impoundments with the exception that the requirements in section 4.8.4.b of this rule shall be replaced by the following:

**5.5.2.c.A.** On a semi-annual basis, the chemical composition of the leachate flowing into a leachate treatment system from a coal combustion by-product facility must, unless waived by the director, be determined through the analysis of the leachate for the following parameters: alkalinity, arsenic, barium, bicarbonate, hardness, boron, cadmium, calcium, chloride, total and hexavalent chromium, iron, lead, manganese, magnesium, sulfate, total dissolved solids, total organic carbon (TOC), specific conductance, zinc, and any other parameter which is specifically known to be associated with the wastes in question and specified by the director in writing.

**5.5.2.c.A.(a)** The monitoring parameters listed in section 5.5.2.c.A of this rule must be reported as total metals, unless otherwise specified by the director.

#### **5.5.2.d. Beneficial Use of Coal Combustion By-Products.**

The following uses of coal combustion by-products are deemed to be beneficial and do not require a permit under this rule so long as such uses are consistent with the requirements of section 5.5.2.d of this rule:

**5.5.2.d.A.** Coal combustion by-products used as a material in manufacturing another product (e.g., concrete, flowable fill, lightweight aggregate, concrete block, roofing materials, plastics, paint) or as a substitute for a product or natural resource (e.g., blasting grit, filter cloth precoat for sludge dewatering);

**5.5.2.d.B.** Coal combustion by-products used for the extraction or recovery of materials and compounds contained within the coal combustion by-products;

**5.5.2.d.C.** Coal combustion by-products used as a stabilization/solidification agent for other wastes. This use of coal combustion by-products shall be considered a beneficial use for the purposes of section 5.5.2.d of this rule if the coal combustion by-product is used singly or in combination with other additives or agents to stabilize or solidify another waste product and if:

**5.5.2.d.C.(a)** The person or entity proposing the use has first given advance written notice to the director; and

5.5.2.d.C.(b) The use results in altered physical or chemical characteristics of the other waste and a reduction of the potential for the resulting stabilized mixture to leach constituents into the environment;

5.5.2.d.D. Coal combustion by-products used under the authority of W. Va. Code Chapter 22, Articles 2 and 3 of the West Virginia Division of Environmental Protection;

5.5.2.d.E. Coal combustion by-products used as pipe bedding or as a composite liner drainage layer;

5.5.2.d.F. Coal combustion by-products used as a daily or intermediate cover for Class A, Class B, or Class C solid waste facilities if the specific permit allows for such use;

5.5.2.d.G. Coal combustion bottom ash or boiler slag used as an anti-skid material if such use is consistent with Department of Highways specifications. The use of fly ash as an anti-skid material is not deemed to be a beneficial use; and

5.5.2.d.H. Coal combustion by-products used as a construction material (e.g., subbases, bases) for roads or parking lots that have asphalt or concrete wearing surfaces if approved by the West Virginia Division of Highways or the project owner.

**Note:** Section 5.5.2.d of this rule does not specifically address the beneficial use of coal combustion by-products for structural fills and as soil amendment. These beneficial use applications will be considered in future rulemaking. Until such time, the established prior practices will be continued.

### **5.5.3. Requirements for Industrial Solid Waste Facilities Other Than Coal Combustion By-Product Facilities.**

#### **5.5.3.a. Liner System Requirements.**

Liner system requirements for industrial solid waste landfills and solid waste disposal surface impoundments are as follows:

5.5.3.a.A. Except as otherwise provided in section 5.5.3 of this rule, all provisions of section 4 of this rule are applicable to industrial solid waste landfills and industrial solid waste disposal surface impoundments constructed after the effective date of this rule.

5.5.3.a.A.(a) Any provision of section 4 of this rule may be waived or modified by the director upon written request of the permittee if such provision, in the discretion of the director, clearly does not apply to the industrial solid waste facility or where the waiver or modification is shown to be appropriate for the facility type, type of waste disposed, or site characteristics. Any alternative approved by the director shall be based upon good engineering judgement.

5.5.3.a.B. For industrial solid waste landfills in existence on the effective date of this rule, the liner provisions in sections 4 and 5.5 of

this rule do not apply to closed or closed portions of such landfills. However, the liner provisions apply to any expansion of such facilities. In order to continue to use an active portion of an existing landfill which is unlined after November 5, 1991, the permittee must enter into a compliance schedule requiring such active unlined portions to be closed or retrofitted where appropriate in accordance with this rule by an agreed date by which all waste must thereafter be placed on an approved liner system, which date shall be no later than thirty (30) months following the effective date of this rule.

**5.5.3.a.C.** Solid waste disposal surface impoundments in operation on the effective date of this rule may continue operation throughout the design life of the impoundment, provided the impoundment must not be expanded to a size greater than the design approved by the director in the permit last issued for the facility. Groundwater remediation may be determined on a case-by-case basis by the director based upon an evaluation of the information developed under the assessment provisions of section 4.11.5 of this rule.

**5.5.3.b.** Appropriate monitoring provisions of section 4.11 of this rule shall be incorporated into the permits for industrial solid waste landfills and industrial solid waste disposal surface impoundments in operation on the effective date of this rule. No monitoring shall be required for such facilities closed prior to the effective date of this rule except for closed facilities under a permit as of the effective date of this rule or in connection with any remedial or corrective action program ordered by the director.

## **5.6. Requirements for Uncommon or Miscellaneous Facilities.**

### **5.6.1. Green Boxes, Bins, Roll-Offs and Dumpsters.**

**5.6.1.a.** Each person who causes to be placed a green box, bin, roll-off or dumpster at places other than approved solid waste facilities are responsible for maintenance, prevention of litter, open dump control, and leachate management at the site of the dumpster.

### **5.6.2. Composting. (Reserved)**

**Note:** Composting requirements are regulated under Title 47 Series 38D "Sewage Sludge Management Regulations," and Title 47 Series 38E "Yard Waste Composting Regulations."

## **§47-38-6. Closure and Post-Closure Care.**

### **6.1. Permanent Closure Criteria.**

#### **6.1.1. Applicability.**

Any person who maintains or operates a solid waste facility must, when the fill area or portion thereof reaches final grade or when the director determines that closure is required, cease to accept waste and perform closure activities at the facility or portion thereof in accordance with the plan approval issued by the director and the provisions of section 6.1 of this rule unless otherwise approved by the director in writing.

6.1.1.a. Upon request of the permittee, or upon the director's own initiative, the director may waive or modify any of the closure requirements of section 6 of this rule or allow alternative permit conditions or practices as appropriate for a specific coal combustion by-product facility or industrial solid waste facility based upon the type of wastes disposed, type of facility, site characteristics and sound engineering judgement.

**6.1.1.b. Closure of existing solid waste landfills.**

6.1.1.b.A. Existing SWLFs that cannot make the demonstration specified in section 3.2.7 pertaining to airports, section 3.2.4 pertaining to floodplains, or section 3.2.10 pertaining to unstable areas, must close by October 9, 1996, in accordance with section 6.1 of this rule and conduct post-closure activities in accordance with section 6.3 of this rule.

6.1.1.b.B. The deadline for closure may be extended up to two years if the permittee can demonstrate to the director in writing that:

6.1.1.b.B.(a) There is no available alternative disposal capacity;

6.1.1.b.B.(b) There is no immediate threat to human health and the environment.

**6.1.2. Notification Procedures.**

6.1.2.a. At least one hundred and twenty (120) days prior to closing the facility, the permittee must notify the director in writing of the intent to close the facility and the expected date of closure. Prior to this date, the permittee must notify all users of the facility of the intent to close the facility so that alternative disposal options may be evaluated.

6.1.2.b. Signs must be posted at all points of access to the facility at least thirty (30) days prior to closure indicating the date of closure and alternative disposal facilities.

6.1.2.c. Notice of the upcoming closure must be a Class II legal advertisement which must be published in a local newspaper at least thirty (30) days prior to closure and a copy of the notice must be provided to the director within ten (10) days of the date of publication.

**6.1.3. Restricted Access.**

Within ten (10) days after ceasing to accept waste, the permittee must restrict access by the use of gates, fencing, or other appropriate means to ensure against further use of the facility. If the final use allows access, such access must be restricted until closure has been completed and approved by the director.

**6.1.4. Deed Notation.**

6.1.4.a. Following closure of all portions of the SWLF, the owner or operator must record a deed notation to the SWLF facility property with the county clerk's office that must be available with the deed of the property



that will in perpetuity notify any potential purchaser of the following: (The permittee must also retain a copy of the deed notation in the facility operating record.)

6.1.4.a.A. The land has been used as a landfill facility;

6.1.4.a.B. Its use is restricted under section 6.3.6.c to ensure post-closure care including any use that would interfere with maintaining the integrity and effectiveness of the final cover and maintaining the system to control the formation and release of leachate and explosive gases into the environment.

6.1.4.a.C. The permittee may request permission from the director to remove the notation from the deed if all wastes are removed from the facility.

6.1.4.b. The deed must include at a minimum:

6.1.4.b.A. A survey plot indicating the location and dimension of the landfill;

6.1.4.b.B. A record of waste, including type, location, and quantity of waste disposed of at the site; and

6.1.4.b.C. Disposal location of asbestos and any other waste specified by the director.

6.1.4.c. A certification of deed notation must be filed with the director within ninety (90) days of closure.

#### 6.1.5. Closure and Post-Closure Care.

6.1.5.a. Unless otherwise approved by the director in writing, the closure plan must include the installation of a final cover system that is designed to minimize infiltration and erosion, as follows:

6.1.5.a.A. The permittee must provide a final cover system comprised of an erosion layer underlain by an infiltration layer and grading in the following manner:

##### 6.1.5.a.A.(a) Gas Management Layer.

A one (1) foot layer of a material with a high hydraulic conductivity or a geocomposite drainage layer having a permeability of at least  $1 \times 10^{-3}$  cm/sec may be used in lieu of the one (1) foot drainage layer must be placed directly on the intermediate cover to facilitate landfill gas control;

##### 6.1.5.a.A.(b) Clay Cap Layer.

A cap consisting of a uniform and compacted one (1) foot layer of clay that is no more permeable than  $1 \times 10^{-7}$  cm/s must be placed and graded over the entire surface of each final lift in six (6) inch lifts. The director may, in the issued permit, approve the use of a synthetic material in lieu of the layer of clay;



6.1.5.a.A.(b)(A) An alternative clay cap layer may be approved by the director on a site-specific basis. In no case may this (infiltration) layer be comprised of a less than a minimum of 18 inches of earthen material that has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than  $1 \times 10^{-5}$  cm/sec, whichever is less, and

**6.1.5.a.A.(c) Drainage Layer.**

A one (1) foot drainage layer that is more permeable than  $1 \times 10^{-3}$  cm/s or a geocomposite drainage layer having a permeability of at least  $1 \times 10^{-3}$  cm/sec may be used in lieu of the one (1) foot drainage layer, capable of transmitting flow and preventing erosion must be placed over the cap.

**6.1.5.a.A.(d) Vegetative Cover Layer.**

A uniform and compacted layer of soil that is at least two (2) feet in thickness and capable of supporting vegetation must be placed over the drainage layer. The erosion layer portion of the drainage layer must consist of a minimum six (6) inches of earthen material that is capable of sustaining native plant growth.

**6.1.5.a.B. Placement of Final Cover.**

The operator must place final cover within six (6) months after disposal in the final lift ceases or as soon thereafter as weather permits, unless the permittee obtains written approval from the director allowing a later period based on a demonstration that a later period is necessary to protect the cap and drainage layer from differential settlement of waste at the facility. The director will not allow a later period unless, at a minimum, delayed installation will not cause or allow any violations of any provision of this rule, or based on a demonstration that a later period is necessary to protect the cap and drainage layer from differential settlement of waste at the facility.

6.1.5.a.C. Surface water run-on must be diverted around all areas used for waste disposal to limit the potential for erosion of the cover soils and increased infiltration. Drainage swales conveying surface water runoff over previous waste disposal areas must be lined with a minimum thickness of two (2) feet of earthen material or a layer of synthetic material acceptable to the director.

6.1.5.a.D. The grade of the final surface of the facility must not be less than three percent (3%) nor more than twenty-five percent (25%) unless otherwise approved by the director as a part of the issued permit. Long slopes must incorporate runoff control measures and terracing in order to minimize erosion. For sites having a natural slope greater than twenty-five percent (25%), a slope up to thirty-three percent (33%) may be considered acceptable if terracing is incorporated at least every twenty (20) feet of vertical distance with runoff control.

6.1.5.a.E. Within ninety (90) days after the placement of final cover, the permittee must complete seeding, fertilizing, and mulching of the finished surface. The seed type and amount of fertilizer applied must be

selected depending on the type and quality of topsoil and compatibility with both native vegetation and the final use. Unless otherwise approved by the director in writing, seed mixture and application rates must be in accordance with section 4.5.6 of this rule.

6.1.5.a.F. Additional information may be required at the discretion of the director.

6.1.5.a.G. A closure plan for solid waste facilities other than landfills must include the requirements of sections 6.1.5.a.D and 6.1.5.a.E of this rule and any other requirement specified by the director.

6.1.5.b. **Alternative Final Cover Design** The director may approve an alternative final cover design that includes:

6.1.5.b.A. An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in section 6.1.5.a.A.(b)(A) and

6.1.5.b.B. An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in section 6.1.5.a.A.(d).

6.1.5.c. The permittee must prepare a written closure plan that describes the steps necessary to close all portions of the SWLF at any point during its active life in accordance with the cover design requirements in section 6.1.5.a or 6.1.5.b, as applicable.

6.1.5.c.A. The closure plan, at a minimum, must include the following information:

6.1.5.c.A.(a) A description of the final cover, designed in accordance with section 6.1.5.a and the methods and procedures to be used to install the cover;

6.1.5.c.A.(b) An estimate of the largest area of the SWLF ever requiring a final cover as required under section 6.1.5.a at any time during the active life;

6.1.5.c.A.(c) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and

6.1.5.c.A.(d) A schedule for completing all activities necessary to satisfy the closure criteria in section 6 of this rule.

6.1.5.d. The permittee must notify the director that a closure plan has been prepared and placed in the operating record no later than the effective date of this rule, or by the initial receipt of waste, whichever is later.

6.1.5.e. Prior to beginning closure of each portion of the SWLF as specified in section 6.1.5.f a permittee must notify the director that a notice of the intent to close the portion of the SWLF has been placed in the operations record.

6.1.5.f. The permittee must begin closure activities of each portion of the SWLF no later than 30 days after the date on which the SWLF receives the known final receipt of wastes or, if the SWLF has remaining capacity and there is a reasonable likelihood that the SWLF will receive additional wastes, no later than one year after the most recent receipt of wastes.

6.1.5.f.A. Extensions beyond the one-year deadline for beginning closure may be granted by the director if the permittee demonstrates that the SWLF has the capacity to receive additional wastes and the permittee has taken and will continue to take all steps necessary to prevent threats to human health and the environment from the unclosed portion of the SWLF.

6.1.5.g. The permittee of all SWLFs must complete closure activities of each SWLF in accordance with the closure plan within 180 days following the beginning of closure as specified in section 6.1.5.f of this rule

6.1.5.g.A. Extensions of the closure period may be granted by the director if the permittee demonstrates that closure will, of necessity, take longer than 180 days and he or she has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed portion of the SWLF.

#### 6.1.6. Final Use at Landfills.

The following activities are prohibited at closed landfills unless specifically approved by the director in writing:

6.1.6.a. Use of the facility for agricultural purposes;

6.1.6.b. Establishment or construction of any buildings; or

6.1.6.c. Excavation of the final cover or any waste materials.

#### 6.1.7. Certification by Registered Professional Engineer.

6.1.7.a. Following closure of each portion of the SWLF, all closure activities must be inspected and approved by a registered professional engineer prior to the application to the director for closure approval. The permittee must also notify the director, in writing of this certification, signed by an independent registered professional engineer and approved by the director, verifying that closure has been completed in accordance with the closure plan. A copy of all related information must be retained in the facility operating record.

#### 6.1.8. Closure Approval.

Upon completion of requirements related to closure, the director will issue a final closure approval. The date of the director's final closure approval must be the date of commencement of the post-closure bond liability period.

#### 6.2. Inactive Status.

Upon application to the director, a permittee may request inactive status for a period not to exceed six (6) months. To qualify for inactive status,

the permittee must:

**6.2.1. Intermediate Cover.**

Demonstrate that all solid wastes are covered by at least one (1) foot of intermediate cover.

**6.2.2. Final Cover.**

Demonstrate that all areas where solid waste disposal is complete have been covered with final cover as described in section 4.6.2.b.C of this rule.

**6.2.3. Revegetation.**

Demonstrate that all disturbed areas have been seeded in accordance with the revegetation plans specified by section 4.5.6 of this rule.

**6.2.4. Restricted Access.**

Restrict access to the area.

**6.2.5. Maintenance of Leachate Control.**

Demonstrate that leachate collection and treatment will be maintained.

**6.2.6. Deed Notation.**

Demonstrate that notations have been made in permanent deed records in the County Clerk's Office that the site has been used as a solid waste facility.

**6.2.7. Other Assurances.**

Provide any other assurance specified by the director.

**6.3. Post-Closure Care Requirements.**

Following closure of each portion of the SWLF, the permittee must conduct post-closure care as required by the permit. Post-closure care must continue for up to thirty (30) years after final closure of areas unless otherwise modified by the director and must consist of the following:

**6.3.1. Monitoring.**

Monitoring must continue as specified in the monitoring plan required by the permit.

**6.3.2. Repair of Settlement.**

Any settling of solid waste which occurs up to ten (10) years of the date of final closure, causing ponding of waters in areas of solid waste deposits, must be repaired promptly. Such repairs must include any necessary regrading, additions of fill material, and revegetation of settled areas, while maintaining the integrity and effectiveness of any final cover, including making repairs to the cover as necessary to correct the effects of settlement,

subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;

#### **6.3.3. Repair of Cover Material.**

Any cracking or erosion of cover material which occurs and may cause waters to enter solid waste deposits must be repaired immediately. Such repairs must include any necessary regrading, additions of cover material, and revegetation to eliminate such cracks or eroded areas.

#### **6.3.4. Site Monitoring.**

Further disposal of solid waste at a closed solid waste facility is prohibited. The closed solid waste facility must be monitored by the permittee, at a minimum frequency of once each month during the post-closure period, to ensure that solid waste deposits and vandalism do not occur at the closed solid waste facility. Any solid waste deposited at the closed solid waste facility during the post-closure period must be promptly removed and disposed of at an approved solid waste facility. Evidence of disease vectors must be treated promptly.

**6.3.4.a.** Maintaining and operating the leachate collection system in accordance with the requirements in section 4.5.4.a.

**6.3.4.a.A.** The director may allow the permittee to stop managing leachate if the permittee demonstrates that leachate no longer poses a threat to human health and the environment;

**6.3.4.b.** Monitoring the groundwater in accordance with the requirements of section 4.11 and maintaining the groundwater monitoring system, if applicable; and

**6.3.4.c.** Maintaining and operating the gas monitoring system in accordance with the requirements of section 4.10 of this rule.

#### **6.3.5. Length of the Post-Closure Care Period**

The length of the post-closure care period may be:

**6.3.5.a.** Decreased by the director if the permittee demonstrates that the reduced period is sufficient to protect human health and the environment and this demonstration is approved by the director; or

**6.3.5.b.** Increased by the director, if the director determines that the lengthened period is necessary to protect human health and the environment.

**6.3.6. Post-Closure Plan** The permittee of all SWLFs must prepare a written post-closure plan that includes, at a minimum, the following information:

**6.3.6.a.** A description of the monitoring and maintenance activities required in section 6.3 for each SWLF, and the frequency at which these activities will be performed;

6.3.6.b. Name, address, and telephone number of the person or office to contact about the facility during the post-closure period; and

6.3.6.c. A description of the planned uses of the property during the post-closure period.

6.3.6.c.A. Post-closure use of the property must not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this rule.

6.3.6.c.B. The director may approve any other disturbance if the permittee demonstrates that disturbance of the final cover, liner or other component of the containment system, including any removal of waste, will not increase the potential threat to human health or the environment.

6.3.7. The permittee must notify the director that a post-closure plan has been prepared and placed in the operating record no later than the effective date of this rule, or by the initial receipt of waste, whichever is later.

6.3.7.a. Following completion of the post-closure care period for each portion of the SWLF, the permittee must notify the director that a certification, signed by an independent registered professional engineer and approved by the director, verifying that post-closure care has been completed in accordance with the post-closure plan, has been placed in the operating record.

#### **6.4. Final Post-Closure Inspection.**

6.4.1. If the permittee of a solid waste facility believes that post-closure requirements have been met, the permittee may file a request for a final post-closure inspection with the director.

6.4.2. Upon a request for a final post-closure inspection, the director will inspect the facility to verify that final post-closure has been completed as follows:

6.4.2.a. The applicable operating requirements of the Solid Waste Management Act and all other environmental laws of the State of West Virginia, the rules and regulations of the West Virginia Division of Environmental Protection, all terms and conditions of the facility permit(s), including the approved closure plan, and all orders issued by the director have been complied with.

6.4.2.b. No further remedial action, maintenance, or other activity by the permittee is necessary to continue compliance with the Solid Waste Management Act, all other environmental laws of the State of West Virginia, the rules and regulations of the division, orders issued by the director, and the terms and conditions of the permit and the approved closure plan.

6.4.2.c. The facility is not causing, and will not cause, any adverse effects on the environment, and is not causing a nuisance.

6.4.3. Upon a finding by the director that the facility is in compliance with all factors listed in section 6.4 of this rule, the permittee will be eligible for bond release pursuant to section 6.6 of this rule.

6.4.4. Upon a finding by the director that the facility is not in compliance with all the factors listed in section 6.4 of this rule, the director will initiate proceedings for bond forfeiture pursuant to section 6.5 of this rule.

#### **6.5. Bond Forfeiture.**

##### **6.5.1. Procedure.**

If the director declares a bond or any other form of financial assurance provided by the permittee forfeited, the director will:

6.5.1.a. Send written notification to the principal, to the bond surety, and to every county or regional solid waste authority in the area that utilizes the facility; of the director's determination to declare the bond forfeit and the reasons for the forfeiture;

6.5.1.b. Advise the principal and surety of the right to appeal to circuit court; and

6.5.1.c. Proceed to collect on the bond as provided by applicable laws for the collection of defaulted bonds or other debts.

##### **6.5.2. Collateral Bonds and other Forms of Financial Assurance.**

If the director declares a collateral bond forfeited, the director will pay, or direct the state treasurer to pay, the collateral funds into an appropriate Solid Waste Fund. If upon proper demand and presentation, the banking institution or other person or municipality which issued the collateral refuses to pay the division the proceeds of a collateral undertaking such as a certificate of deposit, letter of credit or government negotiable bond, the director will take appropriate steps to collect the proceeds.

##### **6.5.3. Surety Bond.**

If the director declares a surety bond forfeited, he or she will certify the same to the Office of Attorney General which will proceed to enforce and collect the amount forfeited, which will, upon collection, be paid into an appropriate Solid Waste Fund.

##### **6.5.4. Use of Funds.**

Monies received from the forfeiture of bonds, and interest accrued, will be used first to accomplish final closure of, and to take steps necessary and proper to remedy and prevent adverse environmental effects from, the solid waste facilities upon which liability was charged on the bonds. Any monies remaining after such final closure, post-closure and all necessary remedial actions have been accomplished must be deposited in the Solid Waste Enforcement Fund that was established pursuant to W. Va. Code §22-15-11(h) (1).



## **6.6. Release of Bonds.**

### **6.6.1. Request.**

An operator seeking a release of a bond previously submitted to the director must file a written request with the director for release of the bond amount after inspection or after posting a replacement bond in accordance with the provisions of section 3.13 of this rule.

### **6.6.2. Application.**

The application for bond release must contain the following:

6.6.2.a. The name of the permittee and identification of the facility for which bond release is sought;

6.6.2.b. The total amount of the bond in effect for the facility;  
and

6.6.2.c. Other information that may be required by the director.

6.6.2.d. The release or forfeiture of a bond by the director does not constitute a waiver or release of other liability provided in law, nor does it abridge or alter rights of action or remedies of a person or municipality now or hereafter existing in equity or under common law or statutory law, both criminal and civil.

6.6.2.e. The director may grant bond releases immediately upon final closure, for facilities other than landfills, if it is clearly demonstrated that further monitoring, restoration, or maintenance is not necessary to protect the public health, safety and welfare, and the environment.

## **6.7. Preservation of Remedies.**

Remedies provided or authorized by law for a violation of applicable federal or state statutes, the regulations or rules promulgated thereunder, orders issued by the director, or the terms and conditions of permits are expressly preserved. Nothing in this rule is an exclusive penalty or remedy for such a violation. No action taken under this rule waives or impairs another remedy or penalty provided in law or equity.

## **§47-38-7. Open Dumps.**

### **7.1. Prohibitions.**

7.1.1. No person may create or operate an open dump.

7.1.2. No person may contribute additional solid waste to an open dump at any time.

7.1.3. Except as provided in sections 7.1.4 and 7.1.5 of this rule, no landowner may allow an open dump to exist on his or her property unless such open dump is under a compliance schedule approved by the director.

7.1.4. An open dump operated prior to April 1, 1988 by a landowner or tenant for the disposal of solid waste generated by the landowner or tenant at his or her residence or farm is not deemed to constitute a violation of section 7.1.3 of this rule if such open dump did not constitute a violation of law on January 1, 1988.

7.1.4.a. After April 1, 1988, no additional solid waste may be contributed to an open dump operated by a landowner or tenant for the disposal of solid waste generated by the landowner or tenant at his or her residence or farm.

7.1.4.b. The landowner or tenant who operated an open dump for the disposal of solid waste generated at his or her residence or farm must, at a minimum, cover the accumulated waste with two (2) feet of topsoil.

7.1.5. An unauthorized dump created by unknown persons is not deemed to constitute a violation of section 7.1.3 of this rule and the owner of the land on which such dump is located is not liable for unauthorized dumping unless he refuses to cooperate with the division in stopping the dumping. Cooperation with the division may include, but is not limited to, the following:

7.1.5.a. The posting of signs stating that dumping is illegal;

7.1.5.b. The erection of fencing to surround the accumulated waste;

7.1.5.c. Surveillance of the open dumping areas to determine the identity of contributors to such open dumps;

7.1.5.d. The removal and keeping of certain indications of ownership as contemplated by W. Va. Code §20-7-26(b); or

7.1.5.e. Testimony before a judicial officer regarding the identity of contributors to the dump.

7.1.6. Open burning of solid waste is prohibited.

## 7.2. Protection of the Environment and the Public.

7.2.1. Any site at which the following protective measures have not been instituted shall be classified as an open dump:

7.2.1.a. Measures must be taken to prevent the discharge of pollutants from the accumulated waste into the waters of the State (e.g., measures to prevent runoff into surface water bodies or the infiltration of leachates to local aquifers);

7.2.1.b. Measures must be taken to impede the access of disease vectors to the accumulated waste (e.g., the application of cover material at appropriate frequencies or other techniques approved in writing by the director);

7.2.1.c. Measures must be taken to prevent the introduction of hazardous or infectious materials to the accumulated waste;

7.2.1.d. Measures must be taken to reduce the risk of fire in the accumulated waste (e.g., venting measures to reduce the concentration of explosive gases generated by the waste);

7.2.1.e. Measures must be taken to limit public access to the accumulated waste (e.g., the erection of fencing to surround the accumulated waste);

7.2.1.f. Measures must be taken to prevent adverse impacts to area wildlife, particularly with regard to the destruction or adverse modification of habitat critical to any endangered or threatened species of animal or plant; and

7.2.1.g. Any other similar measures specified by the director in division policy, regulation, or rule.

### **7.3. Schedules of Compliance for Open Dumps.**

7.3.1. Schedules of compliance for open dumps will contain a sequence of enforceable actions.

7.3.2. Schedules of compliance for open dumps may not exceed a total time period for all compliance actions of two (2) years from the date of issuance.

### **7.4. Enforcement.**

7.4.1. If the director has reasonable cause to believe that a potential for environmental or aesthetic degradation or for harm to the health, safety, or welfare of the public exists at any open dump, he or she may require any person responsible for that open dump to conduct such tests or furnish such information as may be reasonably required to determine whether that dump is or may be causing said degradation or harm.

7.4.2. The division may conduct any test deemed necessary by the director in making an investigation or determination of a potential for environmental or aesthetic degradation or for harm to the health, safety, or welfare of the public exists at any open dump.

7.4.3. The director may perform, or require a person by order to perform, any and all acts necessary to carry out the provisions of the Act, regulations, or rule with regard to an open dump.

7.4.3.a. Any person having an interest which is or may be affected or who is aggrieved by any order of the director with regard to an open dump may appeal such order to the Environmental Quality Board pursuant to the provisions of W. Va. Code §22B-3-1 et seq.

### **7.5. Cooperation with the State Division of Highways.**

#### **7.5.1. Roadway Specifications.**

Standards and design specifications for roadways which provide access to municipal solid waste facilities, as promulgated by the commissioner of the

West Virginia Division of Highways, are hereby incorporated by reference. A municipal solid waste facility permit may be suspended or revoked if the owner or operator fails to comply with such roadway specifications.

**7.5.2. Waste-In-Transit Inspections.**

The director may designate authorized representatives to coordinate with authorized representatives of the commissioner of the West Virginia Division of Highways in conducting inspections of solid waste in transit. Such waste-in-transit inspections will be conducted at weigh stations or other designated sites throughout the state pursuant to rules or regulations promulgated by the Division of Highways.

**7.6. Cooperation with the State Tax and Revenue Division.**

7.6.1. The division will cooperate with the State Tax Commissioner in the handling of proceeds received by the State Tax and Revenue Division from fees collected pursuant to the Act.

**7.7. Cooperation with the State Health Division.**

7.7.1. The division will cooperate with the West Virginia Division of Health in assessing the potential for contamination of public water supplies from any proposed or approved solid waste facility, open dump, or other property where solid waste is present.

**7.8. Cooperation with County and Regional Solid Waste Authorities.**

7.8.1. The division will provide such technical assistance concerning the handling and disposal of solid waste to each county and regional solid waste authority as is reasonable and practicable with existing division resources and appropriations available for such purposes.

APPENDIX I  
CONSTITUENTS FOR PHASE I DETECTION MONITORING<sup>1</sup>

## GROUP A:

## Inorganic Constituents:

COMMON NAME <sup>2</sup>	CAS RN <sup>3</sup>
Acidity.....	(Total)
Aluminum.....	(Total)
Alkalinity.....	(Total)
Ammonia Nitrogen.....	(Total)
Antimony.....	(Total)
Arsenic.....	(Total)
Barium.....	(Total)
Beryllium.....	(Total)
Bicarbonates.....	(mg/l)
Boron.....	(Total)
Cadmium.....	(Total)
Chlorides.....	(Total)
Chromium.....	(Total)
Cobalt.....	(Total)
COD.....	(mg/l)
Copper.....	(Total)
Cyanide (Free).....	(Total)
Dissolved Manganese.....	(Total)
Iron.....	(Total)
Lead.....	(Total)
Magnesium.....	(Total)
Mercury.....	(Total)
Molybdenum.....	(Total)
Nickel.....	(Total)
Nitrate.....	(Total)
pH.....	(Std. Units)
Potassium.....	(Total)
Selenium.....	(Total)
Silver.....	(Total)
Sodium.....	(Total)
Specific Conductivity.....	(Micro Ohms)
Sulfate.....	(Total)
TDS.....	(mg/l)
Thallium.....	(Total)
TOC.....	(mg/l)
Total Phenolic Materials.....	(Total)
TSS.....	(Total)
Turbidity.....	(Total)
Vanadium.....	(Total)
Zinc.....	(Total)

In addition to the above, the following parameters should be analyzed: Temperature, hardness, (BOD-5day), flouride, hexavalent chromium and calcium.

## APPENDIX I CONT'D

## GROUP B:

## Organic Constituents:

COMMON NAME <sup>2</sup>	CAS RN <sup>3</sup>
Acetone.....	67-64-1
Acrylonitrile.....	107-13-1
Benzene.....	71-43-2
Bromochloromethane.....	74-97-5
Bromodichloromethane.....	75-27-4
Bromoform; Tribromomethane.....	75-25-2
Carbon disulfide.....	75-15-0
Carbon tetrachloride.....	56-23-5
Chlorobenzene.....	108-90-7
Chloroethane; Ethyl chloride.....	75-00-3
Chloroform; Trichloromethane.....	67-66-3
Dibromochloromethane; Chlorodibromomethane.....	124-48-1
1,2-Dibromo-3-chloropropane; DECP.....	96-12-8
1,2,-Dibromoethane; Ethylene dibromide; EDB.....	106-93-4
o-Dichlorobenzene; 1,2-Dichlorobenzene.....	95-50-1
p-Dichlorobenzene; 1,4-Dichlorobenzene.....	106-46-7
trans-1,4-Dichloro-2-butene.....	110-57-6
1,1-Dichloroethane; Ethylidene chloride.....	75-34-3
1,2-Dichlorethanal Ethylene dichloride.....	107-06-2
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride.....	75-35-4
cis-1,2-Dichlorethylene; cis-1,2- Dichloroethene.....	156-59-2
trans-1,2-Dichloroethylene; trans-1,2- Dichloroethene.....	156-60-5
1,2-Dichloropropane; Propylene dichloride.....	78-87-5
cis-1,3-Dichloropropene.....	10061-01-5
trans-1,3-Dichloropropene.....	10061-02-6
Ethylbenzene.....	100-41-4
2-Hexanone; Methyl butyl ketone.....	591-78-6
Methyl bromide; Bromomethane.....	74-83-9
Methyl chloride; Chloromethane.....	74-87-3
Methylene bromide; Dibromomethane.....	74-95-3
Methylene chloride; Dichloromethane.....	75-09-2
Methyl ethyl ketone; MEK; 2-Butanone.....	78-93-3
Methyl iodide; Iodomethane.....	74-88-4
4-Methyl-2-pentanone; Methyl isobutyl ketone.....	108-10-1
Styrene.....	100-42-5
1,1,1,2-Tetrachloroethane.....	630-20-6
1,1,2,2-Tetrachloroethane.....	79-34-5
Tetrachloroethylene; Perchloroethylene.....	127-18-4
Toluene.....	108-88-3
1,1,1-Trichloroethane; Methylchloroform.....	71-55-6
1,1,2-Trichloroethane.....	79-00-5
Trichloroethylene; Trichloroethene.....	79-01-6
Trichlorofluoromethane; CFC-11.....	75-69-4
1,2,3-Trichloropropane.....	96-18-4

## APPENDIX I CONT'D

Vinyl acetate.....108-05-4  
Vinyl chloride.....75-01-4  
Xylenes.....1330-20-7

1. This list contains volatile organics for which possible analytical procedures provided in EPA Report SW-846 "Test Methods for Evaluating Solid Waste," third edition, November 1986, as revised December 1987, includes Method 8260; and metals for which SW-846 provides either Method 6010 or a method from the 7000 series of methods.
2. Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.
3. Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.



APPENDIX II  
 PHASE II ASSESSMENT MONITORING  
 HAZARDOUS INORGANIC AND ORGANIC CONSTITUENTS<sup>1</sup>

COMMON NAME <sup>2</sup>	CAS RN <sup>3</sup>	CHEMICAL ABSTRACTS SERVICE INDEX NAME <sup>4</sup>	SUGGESTED METHODS <sup>5</sup>	PQL UG/L) <sup>6</sup>
Acenaphthene.....	83-32-9..	Acenaphthylene, 1,2-dihydro-.....	8100....	200
			8270....	10
Acenaphthylene.....	208-96-8..	Acenaphthylene.....	8100....	200
			8270....	10
Acetone.....	67-64-1..	2-Propanone.....	8260....	100
Acetonitrile; Methyl cyanide.....	75-05-8..	Acetonitrile.....	8015....	100
Acetophenone.....	98-86-2..	Ethanone, 1-phenyl.....	8270....	10
2-Acetylamino fluorene; 2-AAF...53-96-3..	53-96-3..	Acetamide, N-9H-fluoren-2-yl-.....	8270....	20
Acrolein.....	107-02-8..	2-Propenal.....	8030....	5
			8260....	100
Acrylonitrile.....	107-13-1..	2-Propenenitrile.....	8030....	5
			8260....	200
Aldrin.....	309-00-2..	1,4,5,8-Dimethanonaphthalene,.....	8080..	0.05
		1,2,3,4,10,10-hexachloro-.....	8270....	10
		1,4,4a,5,8,8a-hexahydro- (1a,4a,4aB,5a,8a,8aB) -		
Allyl chloride.....	107-05-1..	1-Propene, 3-chloro-.....	8010....	5
			8260....	10
4-Aminobiphenyl.....	92-67-1..	{1,1 <sup>1</sup> --Biphenyl}-4-amine.....	8270....	20
Anthracene.....	120-12-7..	Anthracene.....	8100....	200
			8270....	10
Antimony.....	(Total) ..	Antimony.....	6010....	300
			7040....	2000
			7041....	30

## APPENDIX II CONT'D

Arsenic.....	(Total) ..	Arsenic.....	6010....	500
			7060....	.10
			7061....	.20
Barium.....	(Total) ..	Barium.....	6010....	.20
			7080....	1000
Benzene.....	71-43-2..	Benzene.....	8020....	.2
			8021....	0.1
			8260....	.5
Benzo (a) anthracene; Benzathracene.56-55-3..		Benz (a) anthracene.....	8100....	.200
			8270....	.10
Benzo (b) fluoranthene.....205-99-2..		Benz (e) acephenanthrylene.....	8100....	.200
			8270....	.10
Benzo (k) fluoranthene.....207-08-9..		Benzo (k) fluoranthene.....	8100....	.200
			8270....	.10
Benzo (ghi) perylene.....191-24-2..		Benzo (ghi) perylene.....	8100....	.200
			8270....	.10
Benzo (a) pyrene.....50-32-8..		Benzo (a) pyrene.....	8100....	.200
			8270....	.10
Benzyl alcohol.....100-51-6..		Benzenemethanol.....	8270....	.20
Beryllium.....	Total) ..	Beryllium.....	6010....	.3
			7090....	.50
			7091....	.2
alpha-BHC.....319-84-6..		Cyclohexane, 1,2,3,4,5,6- .....	8080....	0.05
		hexachloro-, (1a,2a,3B,4a,5B,6B) ..	8270....	.10
beta-BHC.....319-85-7..		Cyclohexane, 1,2,3,4,5,6- .....	8080....	0.05
		hexachloro-, (1a,2a,3B,4a,5B,6B) ..	8270....	.20
delta-BHC.....319-86-8..		Cyclohexane, 1,2,3,4,5,6- .....	8080....	0.1
		hexachloro-, (1a,2a,3a,4B,5a,6B) ..	8270....	.20
gamma-BHC;Lindane.....58-89-9..		Cyclohexane, 1,2,3,4,5,6- .....	8080....	0.05
		hexachloro-, (1a,2a,3B,4a, 5a,6B) ..	8270....	.20

## APPENDIX II CONT'D

Bis(2-chloroethoxy)methane.....	111-91-1..Ethane, 1,1 <sup>1</sup> -{methylenebis(	8110.....5
	(oxy)}bis{2-chloro	8270.....10
Bis(2-chloroethyl)ether;.....	111-44-4..Ethane, 1,1-oxybis{2-chloro-	8110.....3
Dichlor-oethyl ether		8270.....10
Bis(2-chloro 1-methylethyl).....	108-60-1..Propane, 2,2-oxybis{1-chloro-	8110.....10
ether; 2,2 <sup>1</sup> -Dichlorodiiso-		8270.....10
propyl ether; DCIP See Note 7.		
Bis(2-ethylhexyl)phthalate.....	117-81-7..1,2-Benzenedicarboxylic acid,.....	8060.....20
	bis(2-ethylhexyl) ester	
Bromochloromethane;.....	74-97-5..Methane, bromochloro-.....	8021... 0.1
Chloro-bromomethane		8260.....5
Bromodichloromethane;.....	75-27-4..Methane, bromodichloro-.....	8010.....1
Dibromochloromethane		8021... 0.2
		8260.....5
Bromoform;Tribromomethane.....	75-25-2..Methane, tribromo.....	8010.....2
		8021.....15
		8260.....5
4-Bromophenyl.phenyl ether.....	101-55-3..Benzene, 1-bromo-4-phenoxy.....	8110.....25
		8270.....10
Butyl benzyl phthalate; Benzyl...85-68-7..1,2-Benzenedicarboxylic acid,.....		8060.....5
butyl phthalate	butyl phenylmethyl ester	8270 10
Cadmium.....	(Total)..Cadmium.....	6010.....40
		7130.....50
		7131.....1
Carbon disulfide.....	75-15-0..Carbon disulfide.....	8260.....100
Carbon tetrachloride.....	56-23-5..Methane, tetrachloro-.....	8010.....1
		8021... 0.1
		8260.....10
Chlordane.....	See Note 8..4,7-Methano-1H-indene,.....	8080... 0.1
	1,2,4,5,6,7,8,8-octachloro-	8270.....50
	2,3,3a,4,7,7a-hexahydro-	

## APPENDIX II CONT'D

p-Chloroaniline.....	106-47-8..	Benzenamine, 4-chloro.....	8270.....	20
Chlorobenzene.....	108-90-7..	Benzene, chloro-.....	8010.....	2
			8020.....	2
			8021...	0.1
			8260.....	5
Chlorobenzilate.....	510-15-6..	Benzeneacetic acid, 4-chloro-a-....	8270.....	10
		(4-chlorophenyl)-a-		
		hydroxyethyl ester		
p-Chloro-m-cresol;.....	59-50-7..	Phenol, 4-chloro-3-methyl-.....	8040.....	5
4-Chloro-3-methylphenol			8270.....	20
Chloroethane;Ethyl chloride.....	75-00-3..	Ethane, chloro-.....	8010.....	5
			8021.....	1
			8260.....	10
Chloroform,Trichloromethane.....	67-66-3..	Methane, trichloro-.....	8010...	0.5
			8021...	0.2
			8260.....	5
2-Chloronaphthalene.....	91-58-7..	Naphthalene, 2-chloro-.....	8120.....	10
			8270.....	10
2-Chlorophenol.....	95-57-8..	Phenol, 2-chloro-.....	8040.....	5
			8270.....	10
4-Chlorophenyl phenyl ether....	7005-72-3..	Benzene, 1-chloro-4-phenoxy-.....	8110.....	40
			8270.....	10
Chloroprene.....	126-99-8..	1,3-Butadiene, 2-chloro-.....	8010.....	50
			8260.....	20
Chromium.....	(Total) ..	Chromium.....	6010.....	70
			7190.....	500
			7191.....	10
Chrysene.....	218-01-9..	Chrysene.....	8100.....	200
			8270.....	10

## APPENDIX II CONT'D

Cobalt.....(Total) ..Cobalt.....	6010.....	70
	7200.....	500
	7201.....	10
Copper.....(Total) ..Copper.....	6010.....	60
	7210.....	200
	7211.....	10
m-Cresol; 3-methylphenol.....108-39-4..Phenol, 3-methyl.....	8270.....	10
o-Cresol; 2-methylphenol.....95-48-7..Phenol, 2-methyl.....	8270.....	10
p-Cresol; 4-methylphenol.....106-44-5..Phenol, 4-methyl.....	8270.....	10
Cyanide.....57-12-5..Cyanide.....	9010.....	200
2,4-D; 2,4-Dichloro-.....94-75-7..Acetic acid (2,4-dichloro phenoxy) phenoxyacetic acid	8150.....	10
4,4 <sup>1</sup> -DDD.....72-54-8..Benzene 1,1 <sup>1</sup> -(2,2-dichloro-.....	8080... 0.1	
	ethylidene)bis{4-chloro-.....	8270.....10
4,4 <sup>1</sup> -DDE.....72-55-9..Benzene 1,1 <sup>1</sup> -(dichloro-.....	8080... 0.05	
	ethyenyliidene)bis{4-chloro-.....	8270.....10
4,4 <sup>1</sup> -DDT.....50-29-3..Benzene 1,1 <sup>1</sup> -(trichloro-.....	8080... 0.1	
	ethylidene)bis.....	8270.....10
	{4-chloromethylethyl)	
Diallate.....2303-16-4..Carbamothioic acid,.....	8270.....	10
	bis(1-methylethyl)-S-(2,3-	
	dichloro- 2-propenyl) ester	
Dibenz{a,h}anthracene.....53-70-3..Dibenz{a,h}anthracene.....	8100.....	200
	8270.....	10
Dibenzofuran.....132-64-9..Dibenzofuran.....	8270.....	10
Dibromochloromethane;.....124-48-1..Methane, dirbromochloro-.....	8010.....	1
Chlorodibromomethane	8021... 0.3	
	8260.....	5
1,2-Dibromo-.....96-12-8..Propane, 1,2-dibrome-3-chloro-.....	8011.....	0.1
3-chloropropane;DBCP	8021.....	30
	8260.....	25

## APPENDIX II CONT'D

1,2-Dibromoethane;.....106-93-4..Ethane, 1,2-dibromo.....	8011...	0.1
Ethylene dibromide;EDB	8021.....	10
	8260.....	5
Di-n-butyl phthalate.....84-74-2..1,2-Benzenedicarboxylic acid,.....	8060.....	5
dibutyl ester	8270.....	10
o-Dichlorobenzene;.....95-50-1..Benzene, 1,2-dichloro-.....	8010.....	2
1,2-Dichlorobenzene	8020.....	5
	8021...	0.5
	8120.....	10
	8260.....	5
	8270.....	10
m-Dichlorobenzene;.....541-73-1..Benzene, 1,3-Dichloro-.....	8010.....	5
1,3-Dichlorobenzene	8020.....	5
	8021...	0.2
	8120.....	10
	8260.....	5
	8270.....	10
p-Dichlorobenzene;.....106-46-7..Benzene, 1,4-Dichloro-.....	8010.....	2
1,4-Dichlorobenzene	8020.....	5
	8021...	0.1
	8120.....	15
	8260.....	5
	8270.....	10
3,3 <sup>1</sup> --Dichlorobenzidine.....91-94-1..{1,1 <sup>1</sup> -Biphenyl}-4,4 <sup>1</sup> -diamine,.....	8270.....	20
3,3 <sup>1</sup> --dichloro-		
trans-1,4-Dichloro-2-.....110-57-6..2-Butene, 1,4-dichlor-(E).....	8260.....	100
butene		
Dichlorodifluoro-.....75-71-8..Methane, dichlorodifluoro.....	8021...	0.5
methane; CFC 12	8260.....	5

## APPENDIX II CONT'D

1,1-Dichloroethane;.....75-34-3..Ethane, 1,1-dichloro.....	8010.....1
Ethylidene chloride	8021... 0.5
	8260.....5
1,2-Dichloroethane;.....107-06-2..Ethane, 1,1-dichloro.....	8010... 0.5
Ethylene dichloride	8021... 0.3
	8260.....5
1,1-Dichloroethylene;.....75-35-4..Ethene, 1,1-dichloro.....	8010.....1
1,1-Dichloroethene;	8021... 0.5
Vinylidene chloride	8260.....5
cis-1,2-Dichloroethylene;.....156-59-2..Ethene, 1,2-dichloro-, (Z).....	8021... 0.2
cis-1,2-Dichloroethane	8260.....5
trans-1,2-Dichloro-.....156-60-5..Ethene, 1,2-dichloro-, (E).....	8010.....1
ethylene; trans-1,2-	8021... 0.5
Dichloroethene	8260.....5
2,4-Dichlorophenol.....120-83-2..Phenol, 2,4-dichloro-.....	8040.....5
	8270.....10
2,6-Dichlorophenol.....87-65-0..Phenol, 2,6-dichloro-.....	8270.....10
1,2-Dichloropropane;.....78-87-5..Propane, 1,2-dichloro-.....	8010... 0.5
Propylene dichloride	8021.. 0.05
	8260.....5
1,3-Dichloropropane;.....142-28-9..Propane, 1,3-dichloro-.....	8021... 0.3
Trimethylene dichloride	8260.....5
2,2-Dichloropropane;.....594-20-7..Propane, 2,2-dichloro-.....	8021... 0.5
Isopropylidene chloride	8260.....15
1,1-Dichloropropene.....563-58-6..1-Propene, 1,1-dichloro-.....	8021... 0.2
	8260.....5
cis-1,3-Dichloropropene.....10061-01-5..1-Propene, 1,3-dichloro- (Z).....	8010.....20
	8260.....10
trans-1,3-Dichloro-.....10061-02-6..1-Propene, 1,3-dichloro- (E).....	8010.....5
propene	8260.....10



## APPENDIX II CONT'D

Dieldrin.....	60-57-1..2,7:3,6-Dimethanonaphth.....	8080... 0.05
	{2,3-b}oxirene, 3,4,5,6,9,9	8270.....10
	-hexa, chloro-1a,2,2a,3,6,6a,7,	
	7a-octa- hydro-, (1aa,2B,2aa,3B,	
	6B,6aa,7B,7aa)	
Diethyl phthalate.....	84-66-2..1,2-Benzenedicarboxylic.....	8060.....5
	acid, diethyl ester.....	8270.....10
0,0-Diethyl 0-2-.....	297-97-2..Phosphorothioic acid,.....	8141.....5
pyrazinyl	0,0-diethyl 0-pyrazinyl ester	8270.....20
phosphorothioate; Thionazin		
Dimethoate.....	60-51-5..Phosphorodithioic acid,.....	8141.....3
	0,0-diethyl,S-{2-(methylamino)	8270.....20
	-2-oxoethyl} ester	
p-(Dimethylamino)azobenzene.....	60-11-7..Benzenamine,N,N-dimethyl-.....	8270.....10
	4-(phenylazo)	
7,12-Dimethylbenz{a}anthracene-..	57-97-6..Benz{a}anthracene, 7,12-dimethyl-..	8270.....10
3,3-Dimethylbenzidine-.....	119-93-7..{1,1Biphenyl}-4,4-diamine,.....	8270.....10
	3,3-dimethyl-	
2,4-Dimethylphenol;.....	105-67-9..Phenol, 2,4-dimethyl.....	8040.....5
m-Xylenol		8270.....10
Dimethyl phthalate.....	131-11-3..1,2-Benzenedicarboxylic acid,.....	8060.....5
	dimethyl ester	8270.....10
m-Dinitrobenzene.....	99-65-0..Benzene, 1,3-dinitro-.....	8270.....20
4,6-Dinitro-o-cresol.....	534-52-1..Phenol, 2-methyl-4,6-dinitro.....	8040....150
4,6-Dinitro-2-methylphenol		8270.....50
2,4-Dinitrophenol;.....	51-28-5..Phenol, 2,4-dinitro.....	8040....150
		8270.....50
2,4-Dinitrofluorene.....	121-14-2..Benzene, 1-methyl-2,4-dinitro-.....	8090... 0.2
		8270.....10

## APPENDIX II CONT'D

2,6-Dinitrotoluene.....	606-20-2..	Benzene, 2-methyl-1,3-dinitro-.....	8090... 0.1
			8270.....10
Dinoseb; DNBP; 2-sec-.....	88-85-7..	Phenol, 2-(1-methylpropyl)-.....	8150.....1
Butyl-4,6-dinitrophenol		4,6-dinitro-	8270.....20
Di-n-octyl phthalate.....	117-84-0..	1,2-Benzenedicarboxylic acid,.....	8060.....30
		dioctyl ester.....	8270.....10
Diphenylamine.....	122-39-4..	Benzenamine, N-phenyl-.....	8270.....10
Disulfoton.....	298-04-4..	Phosphorodithioic acid,0,0-diethyl	8140.....2
		S-{2-(ethylthio)ethyl}.ester	8141... 0.5
			8270.....10
Endosulfan I.....	959-98-8..	6,9-Methano-2,4,3-benzodiox-.....	8080... 0.1
		athiepin, 6,7,8,9,10,10-hexa-	8270.....20
		chloro 1,5,5a,6,9,9a-hexahydro,	
		3-oxide	
Endosulfan II.....	33213-65-9..	6,9-Methano-2,4,3-benzodiox-.....	8080... 0.05
		athiepin, 6,7,8,9,10,10-hexa-	8270.....20
		chloro 1,5,5a,6,9,9a-hexa-hydro,	
		3-oxide, (3a,5aa,6B,9B,9aa)-	
Endosulfan sulfate.....	1031-07-8..	6,9-Methano-2,4,3-benzodiox-.....	8080... 0.5
		athiepin, 6,7,8,9,10,10-hex-	8270.....10
		achloro 1,5,5a,6,9,9a-hexa-	
		hydro, 3,3-dioxide.	
Endrin.....	72-20-8..	2,7:3,6-Dimethanonaphth{2,3-b}.....	8080... 0.1
		oxirene,3,4,5,6,9,9-hexachloro-	8270.....20
		1a,2,2a,3,6,6a,7,7a- octahydro-,	
		(1aa,2B,2aB,3a,6a,6aB,7B,7aa) -	
Endrin aldehyde.....	7421-93-4..	1,2,4-Methenocyclopenta{cd}.....	8080... 0.2
		pentalene-5- carboxaldehyde,	8270.....10
		2,2a,3,3,4,7-hexachlorodec ahydro-,	
		(1a,2B,2aB,4B,4aB,5B,6aB,6bB,7R)	

## APPENDIX II CONT'D

Ethylbenzene.....	100-41-4..Benzene, ethyl-.....	8020.....2	8221... 0.05
			8260.....5
Ethyl methacrylate.....	97-63-2..2-Propenoic acid, 2-methyl-,.....	8015.....5	
	ethyl ester	8260.....10	8270.....10
Ethyl methanesulfonate.....	62-50-0..Methanesulfonic acid, ethylester...	8270.....20	
Famphur.....	52-85-7..Phosphorothioic acid, 0-.....	8270.....20	
	[4-{(dimethylamino)sulfonyl}		
	phenyl} 0,0-dimethyl ester		
Fluoranthene.....	206-44-0..Fluoranthene.....	8100....200	8270.....10
Fluorene.....	86-73-7..9-H-Fluorene.....	8100....200	8270.....10
Heptachlor.....	76-44-8..4,7-Methano-1H-indene, 1,4,5,6,7,..	8080.. 0.05	
	8,8-heptachloro-3a,4,7,	8270.....10	
	7a-tetrahydro-		
Heptachlor epoxide.....	1024-57-3..2,5-Methano-2H-indeno{1,2-b} .....	8080.....1	
	oxirene,2,3,4,5,6,7,7-hepta	8270... .10	
	chloro-1a,1b,5,5a,6,2,2,		
	hexahydro- (1aa,1bB,2a,5a,		
	5aB,6B,6aa)		
Hexachlorobenzene.....	118-74-1..Benzene, hexachloro.....	8120... 0.5	8270 10
Hexachlorobutadiene.....	87-68-3..1,3-Butadiene, 1,1,2,3,4,.....	8021... 0.5	
	4-hexachloro-	8120.....5	8260.....10
		8270.....10	
Hexachlorocyclopentadiene.....	77-47-4..1,3-Cyclopentadiene, 1,2,3, 4,5,...	8120.....5	
	5-hexachloro-	8270.....10	

## APPENDIX II CONT'D

Hexachloroethane.....	67-72-1..Ethane, hexachloro-.....	8120....	0.5
		8260....	10
		8270....	10
Hexachloropropene.....	1888-71-7..1-Propene, 1,1,2,3,3,3-hexachloro-..	8270....	10
2-Hexanone; Methyl.....	591-78-6..2-Hexanone.....	8260....	50
butyl ketone			
Indeno(1,2,3-cd)pyrene.....	193-39-5..Indeno(1,2,3-cd)pyrene.....	8100....	200
		8270....	10
Isobutyl alcohol.....	78-83-1..1-Propanol, 2-methyl-.....	8015....	50
		8240....	100
Isodrin.....	465-73-6..1,4,5,8-Dimethanonaphthalene,.....	8270....	20
	1,2,3,4,10,10-hexachloro-	8260....	10
	1,4, 4a,5,8,8a hexahydro-		
	(1a,4a, 4aB,5B,8B,8aB) -		
Isophorone.....	78-59-1..2-Cyclohexen-1-one,3,5,5 trimethyl	8090....	60
		8270....	10
Isosafrole.....	120-58-1..1,3-Benzodioxole, 5-(1-pro-penyl) ..	8270....	10
Kepone.....	143-50-0..1,3,4-Metheno-2H-cyclobuta{cd}.....	8270....	20
	pentalen-2-one,1,1a,3,3a,4,5,5,		
	5a,5b, 6-decachlorooctahydro-		
Lead.....	(Total) ..Lead.....	6010....	400
		7420....	1000
		7421....	10
Mercury.....	(Total) ..Mercury.....	7470....	2
Methacrylonitrile.....	126-98-7..2-Propenenitrile, 2-methyl-.....	8015....	5
		8260....	100
Methapyrilene.....	91-80-5..1,2-Ethanediamine, N.N-dimethyl-...	8270....	100
	N-2-pridiny1-N1/2- thienylmethyl)		
Methoxychlor.....	72-43 5..Benzene,1,1-(2,2,2,trichloro- .....	8080....	2
	ethylidene) bis{4-methoxy-	8270....	10

## APPENDIX II CONT'D

Methyl bromide;.....	74-83-9..	Methane, bromo-.....	8010.....	20
Bromomethane			8021.....	10
Methyl chloride;.....	74-87-3..	Methane, chloro-.....	8010.....	1
Chloromethane			8021....	0.3
3-Methylcholan threne.....	56-49-5..	Benz{j}aceanthrylene, 1,2.....	8270.....	10
		dihydro- 3-methyl-		
Methyl ethyl.ketone; MEK;.....	78-93-3..	2-Butanone.....	8015.....	10
2-Butanone			8260.....	100
Methyl iodide;Iodomethane.....	74-88-4..	Methane, iodo-.....	8010.....	40
			8260.....	10
Methyl methacrylate.....	80-62-6..	2-Propenoic acid, 2-methyl.....	8015.....	2
		ester	8260.....	30
Methyl methanesulfonate.....	66-27-3..	Methanesulfonic acid, methyl.....	8270.....	10
		ester		
2-Methylnaphthalene.....	91-57-6..	Naphthalene, 2-methyl-.....	8270.....	10
Methyl parathion;.....	298-00-0..	Phosphorothioic acid, 0,0-.....	8140....	0.5
Parathion methyl		dimethyl 0-(4-nitrophenyl)ester	8141.....	1
			8270.....	10
4-Methyl-2-pentanone;-.....	108-10-1..	2-Pentanone, 4-methyl.....	8015.....	5
Methyl isobutyl ketone			8260.....	100
Methylene bromide;.....	74-95-3..	Methane, dibromo-.....	8010.....	15
Dibromomethane			8021.....	20
			8260.....	10
Methylene chloride;.....	75-09-2..	Methane, dichloro-.....	8010.....	5
Dichloromethane			8021....	0.2
			8260.....	10
Naphthalene.....	91-20-3..	Naphthalene.....	8021....	0.5
			8100.....	200
			8260.....	5
			8270.....	10
1,4-Naphthoquinone.....	130-15-4..	1,4-Naphthalenedione.....	8270.....	10

## APPENDIX II CONT'D

1-Naphthylamine.....	134-32-7..	1-Naphthalenamine.....	8270.....	10
2-Naphthylamine.....	91-59-8..	2-Naphthalenamine.....	8270.....	10
Nickel.....	(Total) ..	Nickel.....	6010.....	150
			7520.....	400
o-Nitroaniline; 2-Nitroaniline...	88-74-4..	Benzenamine, 2-nitro-.....	8270.....	50
m-Nitroaniline;3-Nitroanile.....	99-09-2..	Benzenamine, 3-nitro-.....	8270.....	50
p-Nitroaniline;.....	100-01-6..	Benzenamine, 4-nitro-.....	8270.....	20
4-Nitroaniline				
Nitrobenzene.....	98-95-3..	Benzene, nitro-.....	8090.....	40
			8270.....	10
o-Nitrophenol; 2-Nitrophenol.....	88-75-5..	Phenol, 2-nitro-.....	8040.....	5
			8270.....	10
p-Nitrophenol; 4-Nitrophenol.....	100-02-7..	Phenol, 4-nitro-.....	8040.....	10
			8270.....	50
N-Nitrosodi-n- butylamine.....	924-16-3..	1-Butanamine, N-butyl-N-nitroso-...	8270.....	10
N-Nitrosodiethylamine.....	55-18-5..	Ethanamine, N-ethyl-N-nitroso.....	8270.....	20
N-Nitrosodimethylamine.....	62-75-9..	Methanamine, N-methyl-N-nitroso-...	8070.....	2
N-Nitrosodiphenylamine.....	86-30-6..	Benzenamine, N-nitroso-N-phenyl...	8070.....	5
N-Nitrosodipropylamine;.....	621-64-7..	1-Propanamine, N-nitroso-N-propyl..	8070.....	10
N-Nitroso-N-dipropylamine;				
Di-n-propylnitrosamine				
N-Nitrosomethylethalamine.....	10595-95-6..	Ethanamine, N-methyl-N-nitroso-...	8270.....	10
N-Nitrosopiperidine.....	100-75-4..	Piperidine, 1-nitroso-.....	8270.....	20
N-Nitrosopyrrolidine.....	930-55-2..	Pyrrolidine, 1-nitroso-.....	8270.....	40
5-Nitro-o-toluidine.....	99-55-8..	Benzenamine, 2-methyl-5-nitro-...	8270.....	10
Parathion.....	56-38-2..	Phosphorothioic acid, 0,0-diethyl..	8141...	0.5
		0-(4-nitrophenyl).ester.....	8270.....	10
Pentachlorobenzene.....	608-93-5..	Benzene, pentachloro-.....	8270.....	10
Pentachloronitrobenzene.....	82-68-8..	Benzene, pentachloronitro-.....	8270.....	20
Pentachlorophenol.....	87-86-5..	Phenol, pentachloro-.....	8040.....	5
			8270.....	50

## APPENDIX II CONT'D

Phenacetin.....	62-44-2..	Acetamide, N-(4-ethoxyphenyl).....	8270.....	20
Phenanthrene.....	85-01-8..	Phenanthrene.....	8100.....	200
			8270.....	10
Phenol.....	108-95-2..	Phenol.....	8040.....	1
p-Phenylenediamine.....	106-50-3..	1,4-Benzenediamine.....	8270.....	10
Phorate.....	298-02-2..	Phosphorodithioic acid, 0,0-.....	8140.....	2
		diethyl S-{ethylthio)methyl}	8141...	0.5
		ester	8270.....	10
Polychlorinated.....	See Note 9..	1,1-Biphenyl, chloro derivatives...	8080.....	50
biphenyls; PCBs; Aroclors			8270.....	200
Pronamide.....	23950-58-5..	Benzamide, 3,5-dichloro-N-.....	8270.....	10
		(1,1-dimethyl-2-propynyl)-		
Propionitrile; Ethyl.....	107-12-0..	Propanenitrile.....	8015.....	60
cyanide			8260.....	150
Pyrene.....	129-00-0..	Pyrene.....	8100.....	200
			8270.....	10
Safrole.....	94-59-7..	1,3-Benzodioxole, 5-(2-propenyl)...	8270.....	10
Selenium.....	(Total) ..	Selenium.....	6010.....	750
			7740.....	20
			7741.....	20
Silver.....	(Total) ..	Silver.....	6010.....	70
			7760.....	100
			7761.....	10
Silvex 2,4,5-TP.....	93-72-1..	Propanoic acid, 2-(2,4,5-.....	8150.....	2
		trichlorophenoxy)-		
Styrene.....	100-42-5..	Benzene, ethenyl-.....	8020.....	1
			8021...	0.1
			8260.....	10
Sulfide.....	18496-25-8..	Sulfide.....	9030...	4000
2,4,5-T; 2,4,5-.....	93-76-5..	Acetic acid, (2,4,5-.....	8150.....	2
Trichlorophen oxyacetic acid		trichlorophenoxy)-		



## APPENDIX II CONT'D

1,2,4,5-Tetrachlorobenzene.....	95-94-3..Benzene, 1,2,4,5-tetrachloro-.....	8270.....	10
1,1,1,2-Tetrachloroethane.....	630-20-6..Ethene, 1,1,1,2-tetrachloro-.....	8010.....	5
		8021...	0.05
		8260.....	5
1,1,2,2-Tetrachloroethane.....	79-34-5..Ethane, 1,1,2,2-tetrachloro-.....	8010...	0.5
		8021...	0.1
		8260.....	5
Tetrachloroethylene;.....	127-18-4..Ethane, tetrachloro-.....	8010...	0.5
Tetrachloroethene;		8021...	0.5
Perchloroethylene		8260.....	5
2,3,4,6-Tetrachlorophenol.....	58-90-2..Phenol, 2,3,4,6-tetrachloro-.....	8270.....	10
Thallium.....	(Total)..Thallium.....	6010....	400
		7840...	1000
		7841.....	10
Tin.....	(Total)..Tin.....	6010.....	40
Toluene.....	108-88-3..Benzene, methyl-.....	8020.....	2
		8021...	0.1
		8260.....	5
o-Toluidine.....	95-53-4..Benzenamine, 2-mehtyl-.....	8270.....	10
Toxaphene.....	See Note 10..Toxaphene.....	8080.....	2
1,2,4-Trichlorobenzene.....	120-82-1..Benzene, 1,2,4-trichloro-.....	8021...	0.3
		8120...	0.5
		8260.....	10
		8270.....	10
1,1,1-Trichloroethane;.....	71-55-6..Ethane, 1,1,1-trichloro-.....	8010...	0.3
Methylchloroform-		8021...	0.3
		8260.....	5
1,1,2-Trichlorethane.....	79-00-5..Ethane, 1,1,2-trichloro-.....	8010...	0.2
		8260.....	5

## APPENDIX II CONT'D

Trichloroethylene;.....79-01-6..Ethene, trichloro-.....	8010.....1
Trichloroethene	8021... 0.2
	8260.....5
Trichlorofluoro-.....75-69-4..Methane, trichlorofluoro-.....	8010.....10
methane; CFC-11	8021... 0.3
	8260.....5
2,4,5-Trichlorophenol.....95-95-4..Phenol, 2,4,5-trichloro-.....	8270.....10
2,4,6-Trichlorophenol.....88-06-2..Phenol, 2,4,6-trichloro-.....	8040.....5
	8270.....10
1,2,3-Trichloropropane.....96-18-4..Propane, 1,2,3-trichloro-.....	8010.....10
	8021.....5
	8260.....15
0,0,0-Triethyl.....126-68-1..Phosphorothioic acid,.....	8270.....10
phosphorothioate	0,0,0-triethylester
sym-Trinitrobenzene-.....99-35-4..Benzene, 1,3,5-trinitro-.....	8270.....10
Vanadium.....(Total)..Vanadium.....	6010.....80
	7910...2000
	7911.....40
Vinyl acetate.....108-05-4..Acetic acid, ethenyl ester.....	8260.....50
Vinyl chloride;.....75-01-4..Ethene, chloro-.....	8010.....2
Chloroethene	8021... 0.4
	8260.....10
Xylene(total).....See Note 11..Benzene, dimethyl-.....	8020.....5
	8021... 0.2
	8260.....5
Zinc.....(Total)..Zinc.....	6010.....20
	7950.....50
	7951... 0.5

## APPENDIX II CONT'D

## Notes:

1. The regulatory requirements pertain only to the list of substances; the right hand columns (methods and PQL are given for informational purposes only. See also footnotes 5 and 6.
2. Common names are widely used in governmental regulations, scientific publications, and commerce; synonyms exist for many chemicals.
3. Chemical Abstract Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.
4. CAS index are those used in the 9th Collective Index.
5. Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste," third edition, November 1986, as revised, December 1987. Analytical details can be found in SW-846 and in documentation on file at the Agency. Caution: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.
6. Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQL values listed are generally stated to one significant figure. PQLs are based on 5 ml samples for volatile organics and 1 liter samples for semivolatile organics. Caution: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not part of the regulation.
7. This substance is often called Bis(2-chloroisopropyl) ether, the name Chemical Abstracts Service applies to its noncommercial isomer, Propane, 2,2"-oxybis[2-chloro- (CAS RN 39638-32-9).

## APPENDIX II CONT'D

8. Chlordane: This entry includes alpha-chlordane (CAS RN 5103-71-9), beta-chlordane (CAS RN 5103-74-2), gamma-chlordane (CAS RN 5566-34-7), and constituents of chlordane (CAS RN 57-74-9 and CAS RN 12789-03-6). PQL shown is for technical chlordane. PALS of specific isomers are about 20 ug/l by method 8270.

9. Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12676-74-11-2), Aroclor 1221 (CAS RN 11104-28-2), Aroclor 1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor 1248 (CAS RN 12672-29-6), Aroclor 1254 (CAS RN 11097-69-1), and Aroclor 1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

10. Toxaphene: This entry includes congener chemicals contained in technical toxaphene (CAS RN 8001-35-2), i.e., chlorinated camphene.

11. Xylene (total): This entry includes o-xylene (CAS RN 96-47-6), m-xylene (CAS RN 108-38-3), p-xylene (CAS RN 106-42-3), and unspecified xylenes (dimethylbenzenes) (CAS RN 1330-20-7). PALS for method 8021 are 0.2 for o-xylene and 0.1 for m- or p-xylene. The PQL for m-xylene is 2.0 ug/L by method 8020 or 8260.

## APPENDIX III

MAXIMUM CONTAMINANT LEVELS (MCLs)  
(PROMULGATED UNDER THE SAFE DRINKING WATER ACT)

Chemical	CAS No.	MCL (mg/l)
Arsenic.....	7440-38-2.....	0.05
Barium.....	7440-39-3.....	1.0
Benzene.....	71-343-2.....	0.005
Cadmium.....	7440-43-9.....	0.01
Carbon tetrachloride.....	56-23-5.....	0.005
Chromium (hexavalent).....	7440-47-3.....	0.05
2,4-Dichlorophenoxy acetic acid.....	94-75-7.....	0.1
1,4-Dichlorobenzene.....	106-46-7.....	0.075
1,2-Dichloroethane.....	107-06-2.....	0.005
1,1-Dichloroethylene.....	75-35-4.....	0.007
Endrin.....	75-20-8.....	0.0002
Fluoride.....	7.....	4.0
Lindane.....	58-89-9.....	0.004
Lead.....	7439-92-1.....	0.05
Mercury.....	7439-97-6.....	0.002
Methoxychlor.....	72-43-5.....	0.1
Nitrate.....	.....	10.0
Selenium.....	7782-49-2.....	0.01
Silver.....	7440-22-4.....	0.05
Toxaphene.....	8001-35-2.....	0.005
1,1,1-Trichloroethane.....	71-55-6.....	0.2
Trichloroethylene.....	79-01-6.....	0.005
2,4,5-Trichlorophenoxy acetic acid.....	93-76-5.....	0.01
Vinyl chloride.....	75-01-4.....	0.002

**Appendix IV****Schedule of Solid Waste Facility Permit Application Fees**

Type of Solid Waste Facility	Application Fee
-----	-----
Class A Solid Waste Facility	\$7,500.00
Class B Solid Waste Facility	\$5,000.00
Class C Solid Waste Facility	\$3,000.00
Class D1 Solid Waste Facility	\$3,000.00
Class D Solid Waste Facility	\$250.00
Class E Solid Waste Facility	(Reserved)
Class F Solid Waste Facility	\$5,000.00
Non-Disposal Solid Waste Facility	\$2,500.00
Renewal of Permit	\$1,000.00
Solid Waste Facility Closure	\$2,500.00
Modification to Approved Solid Waste Facility	\$500.00
Background Investigation of Prospective Permittees	\$1,000.00*

\*Fee for each person listed in the disclosure statement required.

4243

H. B. 4243

(By Delegates Douglas, Gallagher, Faircloth, Compton,

Linch and Riggs )

(Introduced January 29, 1996 ; referred to the

Committee on the Judiciary .)

47-38

A BILL to amend and reenact section one, article three, chapter sixty-four of the code of West Virginia, one thousand nine hundred thirty-one, as amended, relating to authorizing the division of environmental protection to promulgate legislative rules relating to solid waste management.

Be it enacted by the Legislature of West Virginia:

That section one, article three, chapter sixty-four of the code of West Virginia, one thousand nine hundred thirty-one, as amended, be amended and reenacted, to read as follows:

**ARTICLE 3. AUTHORIZATION FOR BUREAU OF ENVIRONMENT TO PROMULGATE LEGISLATIVE RULES.**

**§64-3-1. Division of environmental protection.**

(a) The legislative rules filed in the state register



1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 four, article five, chapter twenty-two, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (requirements for determining conformity of  
10 general federal actions to applicable air quality  
11 implementation plans (general conformity), 45 CSR 35), are  
12 authorized.

13 (b) The legislative rules filed in the state register  
14 on the twelfth day of August, one thousand nine hundred  
15 ninety-four, authorized under the authority of section  
16 four, article five, chapter twenty-two, of this code,  
17 modified by the division of environmental protection to  
18 meet the objections of the legislative rule-making review  
19 committee and refiled in the state register on the  
20 twenty-third day of November, one thousand nine hundred  
21 ninety-four, relating to the division of environmental  
22 protection (emission standards for hazardous air pollutants  
23 pursuant to 40 CFR Part 63, 45 CSR 34), are authorized.

24 (c) The legislative rules filed in the state register

1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 five, article twenty, chapter sixteen, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (standards of performance for new stationary  
10 sources, 45 CSR 16), are authorized with the amendment set  
11 forth below:

12 "On page two, section 4, subsection 4.1, subdivision  
13 4.1.i, by striking out 'Part 60.195(b)' and inserting in  
14 lieu thereof 'Part 60.194(d)';

15 On page two, section 4, subsection 4.1., subdivision  
16 4.1.k, by striking out 'Part 60.335(a)(1)(i)' and inserting  
17 in lieu thereof 'Part 60.335(f)(1)';

18 And,

19 On page two, section 4, after subdivision 'k', by  
20 inserting a new subdivision to read as follows:

21 'l. Part 60.335(f)(1).'"

22 (d) The legislative rules filed in the state register  
23 on the fifteenth day of August, one thousand nine hundred  
24 ninety-four, authorized under the authority of section

1 four, article five, chapter twenty-two, of this code,  
2 modified by the division of environmental protection to  
3 meet the objections of the legislative rule-making review  
4 committee and refiled in the state register on the  
5 nineteenth day of December, one thousand nine hundred  
6 ninety-four, relating to the division of environmental  
7 protection (permits for construction and major modification  
8 of major stationary sources of air pollution for the  
9 prevention of significant deterioration, 45 CSR 14), are  
10 authorized.

11 (e) The legislative rules filed in the state register  
12 on the twelfth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article five, chapter twenty-two, of this code,  
15 modified by the division of environmental protection to  
16 meet the objections of the legislative rule-making review  
17 committee and refiled in the state register on the  
18 twenty-third day of November, one thousand nine hundred  
19 ninety-four, relating to the division of environmental  
20 protection (requirements for determining conformity of  
21 transportation plans, programs and projects developed,  
22 funded or approved under title 23 U.S.C. or the federal  
23 transit act, to applicable air quality implementation  
24 plans, 45 CSR 36), are authorized.

1       (f) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the twenty-  
8 ninth day of December, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (to prevent and control air pollution from the  
11 operation of coal preparation plants and coal handling  
12 operations, 45 CSR 5), are authorized.

13       (g) The legislative rules filed in the state register  
14 on the thirteenth day of September, one thousand nine  
15 hundred ninety-four, authorized under the authority of  
16 section four, article five, chapter twenty-two, of this  
17 code, modified by the division of environmental protection  
18 to meet the objections of the legislative rule-making  
19 review committee and refiled in the state register on the  
20 twelfth day of January, one thousand nine hundred  
21 ninety-five, relating to the division of environmental  
22 protection (to prevent and control air pollution from  
23 hazardous waste treatment, storage or disposal facilities,  
24 45 CSR 25), are authorized.

1       (h) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the  
8 twenty-third day of November, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (acid rain provisions and permits, 45 CSR 33),  
11 are authorized.

12       (i) The legislative rules filed in the state register  
13 on the twelfth day of August, one thousand nine hundred  
14 ninety-four, authorized under the authority of section two,  
15 article one, chapter twenty-two, of this code, modified by  
16 the division of environmental protection to meet the  
17 objections of the legislative rule-making review committee  
18 and refiled in the state register on the twenty-third day  
19 of November, one thousand nine hundred ninety-four,  
20 relating to the division of environmental protection  
21 (emission standards for hazardous air pollutants pursuant  
22 to 40 CFR Part 61, 45 CSR 15), are authorized.

23       (j) The legislative rules filed in the state register  
24 on the twelfth day of August, one thousand nine hundred

1 ninety-four, authorized under the authority of section  
2 four, article five, chapter twenty-two, of this code,  
3 modified by the division of environmental protection to  
4 meet the objections of the legislative rule-making review  
5 committee and refiled in the state register on the  
6 twenty-third day of November, one thousand nine hundred  
7 ninety-four, relating to the division of environmental  
8 protection (provisions for determination of compliance with  
9 air quality management rules, 45 CSR 38), are authorized.

10 (k) The legislative rules filed in the state register  
11 on the twelfth day of August, one thousand nine hundred  
12 ninety-four, authorized under the authority of section  
13 five, article twenty, chapter sixteen, of this code,  
14 modified by the division of environmental protection to  
15 meet the objections of the legislative rule-making review  
16 committee and refiled in the state register on the  
17 twenty-third day of November, one thousand nine hundred  
18 ninety-four, relating to the division of environmental  
19 protection (to prevent and control air pollution from  
20 combustion of refuse, 45 CSR 6), are authorized.

21 (l) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section  
24 four, article fourteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the fourth  
4 day of January, one thousand nine hundred ninety-five,  
5 relating to the division of environmental protection (dam  
6 safety, 47 CSR 34), are authorized with the amendments set  
7 forth below:

8 On page 9, section §47-34-3, by striking out  
9 3.5.2.c.A, and substituting therefor the following:

10 "3.5.2.c.A. An impoundment exceeding forty (40) feet  
11 in height or four hundred (400) acre-feet storage volume  
12 shall not be classified as a Class 3 dam."

13 On pages 17 and 18, section §47-34-7, at the end of  
14 section 7.1.1.b.C. by adding the following:

15 "The design precipitation for a Class 3 dam may be  
16 reduced based on Risk Assessment pursuant to paragraph  
17 3.5.4 of this rule, but in no case to less than a P100  
18 rainfall of six (6) hours in duration."

19 On page 40, section §47-34-13, by striking out section  
20 13.2 and substituting therefor the following:

21 "Performance Requirements - All dams completed before  
22 July 1, 1973, shall meet the applicable design requirements  
23 of Section 7 of this rule. Those dams which do not meet  
24 the applicable design requirement of Section 7 of this rule



1 shall be modified, breached, removed, or properly abandoned  
2 pursuant to the provisions of this rule. In developing the  
3 required plans, specifications, and documentation necessary  
4 to bring the structure into conformity with section 7 of  
5 this rule, the design engineer may consider in his  
6 submitted analyses, peculiarities and local conditions for  
7 each impounding structure with recognition of the many  
8 factors involved, some of which may not be precisely known.  
9 Existing construction documentation and the historical  
10 performance of the structure including documented storms  
11 and spillway flows may be considered by the engineer as  
12 part of the evaluation of the structure. Upon approval by  
13 the Director of the plans, specifications, and  
14 documentation submitted by the engineer, the Director may  
15 issue a certificate of approval."

16 (m) The legislative rules filed in the state register  
17 on the fifteenth day of August, one thousand nine hundred  
18 ninety-four, authorized under the authority of section  
19 fifteen, article one, chapter twenty-two, of this code,  
20 modified by the division of environmental protection to  
21 meet the objections of the legislative rule-making review  
22 committee and refiled in the state register on the eleventh  
23 day of January, one thousand nine hundred ninety-five,  
24 relating to the division of environmental protection

1 (regulations governing environmental laboratories  
2 certification and standards of performance, 47 CSR 32), are  
3 authorized.

4 (n) The legislative rules filed in the state register  
5 on the twenty-eighth day of February, one thousand nine  
6 hundred ninety-four, authorized under the authority of  
7 section three, article two, chapter twenty-two-c, of this  
8 code, modified by the division of environmental protection  
9 to meet the objections of the legislative rule-making  
10 review committee and refiled in the state register on the  
11 twenty-eighth day of July, one thousand nine hundred  
12 ninety-four, relating to the division of environmental  
13 protection (state water pollution control revolving fund  
14 program, 47 CSR 31), are authorized.

15 (o) The legislative rules filed in the state register  
16 on the fifteenth day of August, one thousand nine hundred  
17 ninety-four, authorized under the authority of section six,  
18 article seventeen, chapter twenty-two, of this code,  
19 relating to the division of environmental protection  
20 (underground storage tanks, 47 CSR 36), are authorized.

21 (p) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section six,  
24 article eighteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the  
4 thirteenth day of January, one thousand nine hundred  
5 ninety-five, relating to the division of environmental  
6 protection (hazardous waste management regulations, 47 CSR  
7 35), are authorized.

8 (q) The legislative rules filed in the state register  
9 on the twenty-second day of July, one thousand nine hundred  
10 ninety-four, authorized under the authority of section  
11 four, article three, chapter twenty-two, of this code,  
12 modified by the division of environmental protection to  
13 meet the objections of the legislative rule-making review  
14 committee and refiled in the state register on the  
15 twenty-ninth day of August, one thousand nine hundred  
16 ninety-four, relating to the division of environmental  
17 protection (standards for certification of blasters-surface  
18 coal mines, 38 CSR 2C), are authorized with the amendments  
19 set forth below:

20 On page 4, section 38.2C.4, after the words "Form  
21 MR-30-TR." by inserting a second paragraph to read as  
22 follows:

23 "In lieu of completing the training program, the  
24 applicant for certification or re-certification may

1 complete a self-study course using the study guide and  
2 other materials available from the Division of  
3 Environmental Protection."

4 On page 8, subsection 8.2, after the words "refresher  
5 training course" by inserting the phrase "or complete the  
6 self-study course."

7 On page 8 at subsection 10.1 by striking out the  
8 phrase "a cessation order and/or take other action as  
9 provided in West Virginia Code 22-3-16 and 17" and the  
10 phrase "the provisions of West Virginia Code 22-3-1 et  
11 seq., rules promulgated under that article, or".

12 On page 9, subsection 11.1, by striking out the  
13 subsection and inserting in lieu thereof a new subsection  
14 to read as follows: "11.1. **Suspension** - Upon service of a  
15 written notice of violation by the Director to a certified  
16 blaster, the Director may suspend his or her certification.  
17 Prior to the issuance of such an order, the certified  
18 blaster shall be granted a hearing before the Director to  
19 show cause why his or her certification should not be  
20 suspended."

21 On page 9, subsection 11.2, by striking out the phrase  
22 "or cessation order" in the first sentence.

23 On page 9, Section 12, by striking out the phrase  
24 "cessation order".

1       (r) The legislative rules filed in the state register  
2 on the fifteenth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 nine, article three, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the sixth  
8 day of January, one thousand nine hundred ninety-five,  
9 relating to the division of environmental protection (rules  
10 and regulations relating to abandoned mine lands and  
11 reclamation, 38 CSR 2D), are authorized.

12       (s) The Legislature hereby authorizes and directs the  
13 division of environmental protection to promulgate the  
14 legislative rules filed in the state register on February,  
15 seventh, one thousand nine hundred ninety-five, authorized  
16 under the authority of section five, article twenty,  
17 chapter sixteen, of this code, relating to the prevention  
18 and control of particulate air pollution from combustion of  
19 fuel in indirect heat exchangers, 45 CSR 2, effective the  
20 \* day of \*, one thousand nine hundred ninety-five, with the  
21 amendments set forth below:  
22 On page eight, section 3.4(e) after the word "operated" by  
23 adding the words "at normal operating loads";  
24 And,

1 On page thirteen, section 9.4 by striking the words  
2 "monthly or", and, following the words "quarterly basis" by  
3 striking the word "as"; and by inserting the words "unless  
4 otherwise" following the words "quarterly basis".

5 And,

6 On page thirteen, by creating a new section, designated  
7 section "45.2.10. Variances.

8 10.1. In the event of an unavoidable shortage of fuel  
9 having characteristics or specifications necessary for a  
10 fuel burning unit to comply with the opacity standards set  
11 forth in section 3 or any emergency situation or condition  
12 creating a threat to public safety or welfare, the Director  
13 may grant an exception to the otherwise applicable visible  
14 emission standards for a period not to exceed fifteen (15)  
15 days, provided that visible emissions during the exception  
16 period do not exceed a maximum six (6) minute average of  
17 thirty (30) percent and that a reasonable demonstration is  
18 made by the owner or operator that the emission standards  
19 under section 4 of this rule will not be exceeded during  
20 the exemption period."

21 10.2. In the event a fuel burning unit employing a  
22 flue gas desulphurization system must by-pass such system  
23 because of necessary planned or unplanned maintenance,  
24 visible emissions may not exceed twenty percent (20%)

1 opacity during such period of maintenance. The Director  
2 may require advance notice of necessary planned  
3 maintenance, including a description of the necessity of  
4 the maintenance activity and its expected duration and may  
5 limit the duration of the variance or the amount of the  
6 excess opacity exception herein allowed. The Director  
7 shall be notified of unplanned maintenance and may limit  
8 the duration of the variance or the amount of excess  
9 opacity exception allowed during unplanned maintenance.

10 And, by renumbering subsequent sections.

11 (t) The legislative rules filed in the state register  
12 on the nineteenth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article three, chapter twenty-two, of this code,  
15 relating to the division of environmental protection  
16 (surface mining and reclamation regulations, 38 CSR 2), are  
17 authorized "with the amendments set forth below"

18 On pages 2 and 3, by striking out subsections 1.6, 1.7  
19 and 1.8 in their entirety;

20 On page 6, by inserting a new subsection 2.20, to read  
21 as follows, and renumbering subsequent subsections;

22 "Chemical Treatment means - the treatment of water  
23 from a surface coal mining operation using chemical  
24 reagents such as but not limited to sodium hydroxide,



1 calcium carbonate, or anhydrous ammonia for purposes of  
2 meeting applicable state and federal effluent limitations.  
3 Chemical treatment does not include passive treatment  
4 systems such as but not limited to limestone drains,  
5 wetlands, alkaline addition, application of flyash,  
6 agricultural lime, or injection of flyash, limestone, or  
7 other minerals into underground coal operations."

8       On page 16, section 2, by striking out subsection 2.92  
9 and renumbering the subsequent subsections.

10       On page 25, by striking the second paragraph of  
11 subsection 3.1 (o) and inserting in lieu thereof a new  
12 second paragraph 3.1 of subsection 3.1 (o), to read as  
13 follows: "Any permit application which references an  
14 approved centralized ownership and control file may be  
15 determined to be complete and accurate for the purposes of  
16 this subsection. Each centralized ownership and control  
17 file shall at a minimum:"

18       On page 63, by striking out subsection 3.25 (e).

19       On page 63, by striking out the first sentence in  
20 subsection 3.26, and inserting in lieu thereof the  
21 following:

22       "(a) All changes including name changes, replacements,  
23 and additions to the ownership or control data relative to  
24 a permittee or assignee who will function as an operator

1 pursuant to the provisions of paragraph (c) of subsection  
2 3.25 of this rule shall be reported to the Director."

3 On page 64, after subsection 3.26 (a) (5) by inserting  
4 a new subsection 3.26 (a) (6) to read as follows:

5 "(6) In the event that a permittee or operator has  
6 incurred no changes in its ownership and control  
7 information and therefore has not been obligated to file  
8 a report within any consecutive twelve-month period, that  
9 permittee or operator is required to notify the Director in  
10 writing that no changes to the information required by  
11 paragraphs (b), (c), (d) and (i) of subsection 3.1 of this  
12 rule have occurred."

13 On page 64, by striking out subsection 3.27 (a) and  
14 inserting in lieu thereof the following:

15 "(a) All active surface mining operations shall be  
16 subject to the renewal requirements and provisions for  
17 issuance of a renewal discussed in Section 19 of the Act:  
18 Provided, That the Director may waive the requirement for  
19 renewal if the permittee certifies in writing that all coal  
20 extraction is completed, that all backfilling and regrading  
21 will be completed within sixty (60) days prior to the  
22 expiration date of the permit, and that an application for  
23 Phase I bond release will be filed prior to the expiration  
24 date of the permit. Failure of the permittee complete

1 backfilling and regrading within sixty (60) days prior to  
2 the expiration date of the permit will nullify the waiver.

3 Those operations which have been granted inactive  
4 status in accordance with subsection 14.11 of this rule  
5 shall also be subject to the renewal requirements of  
6 Section 19 of the Act.

7 Applications for renewal shall be filed on forms  
8 provided by the Director and shall contain at a minimum the  
9 following information:"

10 On page 79, by striking out subsection 3.32 (i) and  
11 renumbering the remaining subsections.

12 On page 80, subsection 3.34 (b) after the word  
13 "criteria" by inserting the words "paragraph (b) of  
14 subsection 3.32 of this section";

15 On page 80, by striking out subsection 3.34 (b) (3)  
16 and substituting therefor a new subsection 3.34 (b) (3), to  
17 read as follows: "(3) The permittee was linked to a  
18 violation, penalty or fee through ownership or control,  
19 under the violation review criteria, paragraph (b) of  
20 subsection 3.32 of this section at the time the permit was  
21 issued and an ownership or control link between the  
22 permittee and the person responsible for the violation,  
23 penalty or fee still exists, or when the link was severed  
24 the permittee continues to be responsible for the

1 violation, penalty or fee."

2 On page 82, by striking out subsection 3.34 (g) and  
3 substituting therefor a new subparagraph (g) to read as  
4 follows:

5 "(g) For purposes of this subsection, a permit is  
6 issued when it is originally approved, as well as when a  
7 transfer, assignment, or sale of permit rights is approved  
8 pursuant to paragraphs (a) or (c), subsection 3.25 of this  
9 rule, or where a permit is revised pursuant to subsection  
10 3.26 of this rule."

11 On page 86, at the end of subsection 4.4, by adding  
12 the following sentence: "Prospecting roads are to be  
13 designed, constructed, maintained, and reclaimed in  
14 accordance with the provisions of subsection 13.6 of this  
15 rule."

16 On page 88, by inserting a new subsection 4.7 (a) (1)  
17 to read as follows: (1) Minimize downstream sedimentation  
18 and flooding and renumbering the remaining subsections.

19 On page 92, subsection 4.12, by inserting a new  
20 sentence between the second and third sentence which reads  
21 as follows: "Where the certification statement indicates a  
22 change from the design standards or construction  
23 requirements approved in the permit, such changes will be  
24 documented in as-built plans and submitted for approval to

1 the Director as a permit revision."

2 On Page 146, section 11.6 (a) in the underscored  
3 language, after the word, "completed" by inserting the  
4 words "or nearly completed".

5 On Page 223, by striking out subsection 14.14 (g) (8)  
6 and inserting in lieu thereof a new subsection 14.14 (g)  
7 (8), to read as follows: "(8) Surface water runoff from  
8 areas above and adjacent to the fill shall be diverted into  
9 properly designed and constructed stabilized diversion  
10 channels which have been designed using best current  
11 technology to safely pass the peak runoff from a 100 year,  
12 24-hour precipitation event. The channel shall be designed  
13 and constructed to ensure stability of the fill, control  
14 erosion, and minimize water infiltration into the fill."

15 On Page 232, by inserting a new subsection, designated  
16 subsection 14.19 (d) to read as follows: "(d) Timber from  
17 clearing and grubbing operations may be wind-rowed below  
18 the projected toe of the outslope in a manner that will  
19 provide shelter and habitat for game and non-game wildlife  
20 and provide for enhanced sediment control. These materials  
21 may not be placed in natural water courses or where they  
22 will be covered by spoil material at the toe of the  
23 outslope. The wind-rows must be of relatively uniform  
24 height and width and must be more or less evenly

1 distributed along the lower reaches and within the permit  
2 area."

3       On Page 240, subsection 17.1, in the first sentence,  
4 after the words "mining and reclamation," by striking out  
5 the remainder of the paragraph and substituting therefor  
6 the following: "required by the Act and these Rules,  
7 including the engineering analyses and designs; the  
8 development of cross-section maps and plans; the geologic  
9 drilling and statement of results of test borings and core  
10 samplings; preblast surveys; the collection of  
11 site-specific resource information and production of  
12 protection and enhancement plans for fish and wildlife  
13 habitats and other environmental values; and the collection  
14 of archaeological and historical information; and any other  
15 archaeological and historical information required by the  
16 federal department of the interior and the preparation of  
17 plans that may be necessitated thereby; and the director  
18 shall provide or assume the cost of training coal operators  
19 that meet the qualifications concerning the preparation of  
20 permit applications and compliance with the regulatory  
21 program, and shall ensure that qualified coal operators are  
22 aware of the assistance available under this section.

23       On Page 240, subsection 17.1, after the first  
24 paragraph by inserting a new paragraph, to read as follows:

1 "The Director will develop a procedure for the interstate  
2 coordination and exchange of information collected under  
3 the Small Operators Assistance Program."

4 On Page 241, by striking out subsection 17.4 in its  
5 entirety and substituting therefor the following: "17.4  
6 Request for Assistance. Each applicant requesting  
7 assistance shall provide information on forms provided by  
8 the director in an application that shall be clear and  
9 concise and shall be provided in a format prescribed by the  
10 Director and/or a format required by the Federal Office of  
11 Surface Mining Reclamation and Enforcement."

12 On Page 249, subsection 17.7 (a) (4), after the words  
13 "twelve (12) month period" by striking the remainder of the  
14 sentence and inserting in lieu thereof the words  
15 "immediately following permit issuance."

16 On page 273, subsection 20.6 (a), after the word  
17 "first" by striking out the words "thirty (30)" and  
18 inserting in lieu thereof the word "fifteen".

19 On page 273, subsection 20.6 (c), after the words  
20 "date of the" by striking out the words "Assessment Officer  
21 receiving the  
22 finding specified in paragraph (a) of this subsection." and  
23 inserting in lieu thereof the words "issuance of a notice  
24 or order";



1 or order";

2 On page 274, subsection 20.6 (d), by striking out the  
3 first sentence, and inserting in lieu thereof the  
4 following: "The time and place of an informal assessment  
5 conference shall be posted at the Department of  
6 Environmental Protection Office nearest to the operation.

7 (u) The legislative rules filed in the state register  
8 on the thirty-first day of July, one thousand nine hundred  
9 ninety-five, authorized under the authority of section  
10 five, article fifteen, chapter twenty-two, of this code,  
11 modified by the division of environmental protection to  
12 meet the objections of the legislative rule-making review  
13 committee and refiled in the state register on the twenty-  
14 fourth day of January, one thousand nine hundred  
15 ninety-six, relating to the division of environmental  
16 protection (solid waste management, 47 CSR 38), are  
17 authorized.

18

19 NOTE: The purpose of this bill is to authorize the  
20 Division of Environmental Protection to promulgate  
21 legislative rules relating to solid waste management.

22

23 Strike-throughs indicate language that would be  
24 stricken from the present law, and underscoring indicates  
25 new language that would be added.

2.

8

8

4243

H. B. 4243

(By Delegates Douglas, Gallagher, Faircloth, Compton,

Linch and Riggs )

(Introduced January 29, 1996 ; referred to the

Committee on the Judiciary .)

47-38

A BILL to amend and reenact section one, article three, chapter sixty-four of the code of West Virginia, one thousand nine hundred thirty-one, as amended, relating to authorizing the division of environmental protection to promulgate legislative rules relating to solid waste management.

Be it enacted by the Legislature of West Virginia:

That section one, article three, chapter sixty-four of the code of West Virginia, one thousand nine hundred thirty-one, as amended, be amended and reenacted, to read as follows:

**ARTICLE 3. AUTHORIZATION FOR BUREAU OF ENVIRONMENT TO PROMULGATE LEGISLATIVE RULES.**

**§64-3-1. Division of environmental protection.**

(a) The legislative rules filed in the state register

1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 four, article five, chapter twenty-two, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (requirements for determining conformity of  
10 general federal actions to applicable air quality  
11 implementation plans (general conformity), 45 CSR 35), are  
12 authorized.

13 (b) The legislative rules filed in the state register  
14 on the twelfth day of August, one thousand nine hundred  
15 ninety-four, authorized under the authority of section  
16 four, article five, chapter twenty-two, of this code,  
17 modified by the division of environmental protection to  
18 meet the objections of the legislative rule-making review  
19 committee and refiled in the state register on the  
20 twenty-third day of November, one thousand nine hundred  
21 ninety-four, relating to the division of environmental  
22 protection (emission standards for hazardous air pollutants  
23 pursuant to 40 CFR Part 63, 45 CSR 34), are authorized.

24 (c) The legislative rules filed in the state register

1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 five, article twenty, chapter sixteen, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (standards of performance for new stationary  
10 sources, 45 CSR 16), are authorized with the amendment set  
11 forth below:

12 "On page two, section 4, subsection 4.1, subdivision  
13 4.1.i, by striking out 'Part 60.195(b)' and inserting in  
14 lieu thereof 'Part 60.194(d)';

15 On page two, section 4, subsection 4.1., subdivision  
16 4.1.k, by striking out 'Part 60.335(a)(1)(i)' and inserting  
17 in lieu thereof 'Part 60.335(f)(1)';

18 And,

19 On page two, section 4, after subdivision 'k', by  
20 inserting a new subdivision to read as follows:

21 '1. Part 60.335(f)(1).'"

22 (d) The legislative rules filed in the state register  
23 on the fifteenth day of August, one thousand nine hundred  
24 ninety-four, authorized under the authority of section

1 four, article five, chapter twenty-two, of this code,  
2 modified by the division of environmental protection to  
3 meet the objections of the legislative rule-making review  
4 committee and refiled in the state register on the  
5 nineteenth day of December, one thousand nine hundred  
6 ninety-four, relating to the division of environmental  
7 protection (permits for construction and major modification  
8 of major stationary sources of air pollution for the  
9 prevention of significant deterioration, 45 CSR 14), are  
10 authorized.

11 (e) The legislative rules filed in the state register  
12 on the twelfth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article five, chapter twenty-two, of this code,  
15 modified by the division of environmental protection to  
16 meet the objections of the legislative rule-making review  
17 committee and refiled in the state register on the  
18 twenty-third day of November, one thousand nine hundred  
19 ninety-four, relating to the division of environmental  
20 protection (requirements for determining conformity of  
21 transportation plans, programs and projects developed,  
22 funded or approved under title 23 U.S.C. or the federal  
23 transit act, to applicable air quality implementation  
24 plans, 45 CSR 36), are authorized.

1       (f) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the twenty-  
8 ninth day of December, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (to prevent and control air pollution from the  
11 operation of coal preparation plants and coal handling  
12 operations, 45 CSR 5), are authorized.

13       (g) The legislative rules filed in the state register  
14 on the thirteenth day of September, one thousand nine  
15 hundred ninety-four, authorized under the authority of  
16 section four, article five, chapter twenty-two, of this  
17 code, modified by the division of environmental protection  
18 to meet the objections of the legislative rule-making  
19 review committee and refiled in the state register on the  
20 twelfth day of January, one thousand nine hundred  
21 ninety-five, relating to the division of environmental  
22 protection (to prevent and control air pollution from  
23 hazardous waste treatment, storage or disposal facilities,  
24 45 CSR 25), are authorized.



1       (h) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the  
8 twenty-third day of November, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (acid rain provisions and permits, 45 CSR 33),  
11 are authorized.

12       (i) The legislative rules filed in the state register  
13 on the twelfth day of August, one thousand nine hundred  
14 ninety-four, authorized under the authority of section two,  
15 article one, chapter twenty-two, of this code, modified by  
16 the division of environmental protection to meet the  
17 objections of the legislative rule-making review committee  
18 and refiled in the state register on the twenty-third day  
19 of November, one thousand nine hundred ninety-four,  
20 relating to the division of environmental protection  
21 (emission standards for hazardous air pollutants pursuant  
22 to 40 CFR Part 61, 45 CSR 15), are authorized.

23       (j) The legislative rules filed in the state register  
24 on the twelfth day of August, one thousand nine hundred

1 ninety-four, authorized under the authority of section  
2 four, article five, chapter twenty-two, of this code,  
3 modified by the division of environmental protection to  
4 meet the objections of the legislative rule-making review  
5 committee and refiled in the state register on the  
6 twenty-third day of November, one thousand nine hundred  
7 ninety-four, relating to the division of environmental  
8 protection (provisions for determination of compliance with  
9 air quality management rules, 45 CSR 38), are authorized.

10 (k) The legislative rules filed in the state register  
11 on the twelfth day of August, one thousand nine hundred  
12 ninety-four, authorized under the authority of section  
13 five, article twenty, chapter sixteen, of this code,  
14 modified by the division of environmental protection to  
15 meet the objections of the legislative rule-making review  
16 committee and refiled in the state register on the  
17 twenty-third day of November, one thousand nine hundred  
18 ninety-four, relating to the division of environmental  
19 protection (to prevent and control air pollution from  
20 combustion of refuse, 45 CSR 6), are authorized.

21 (l) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section  
24 four, article fourteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the fourth  
4 day of January, one thousand nine hundred ninety-five,  
5 relating to the division of environmental protection (dam  
6 safety, 47 CSR 34), are authorized with the amendments set  
7 forth below:

8 On page 9, section §47-34-3, by striking out  
9 3.5.2.c.A, and substituting therefor the following:

10 "3.5.2.c.A. An impoundment exceeding forty (40) feet  
11 in height or four hundred (400) acre-feet storage volume  
12 shall not be classified as a Class 3 dam."

13 On pages 17 and 18, section §47-34-7, at the end of  
14 section 7.1.1.b.C. by adding the following:

15 "The design precipitation for a Class 3 dam may be  
16 reduced based on Risk Assessment pursuant to paragraph  
17 3.5.4 of this rule, but in no case to less than a P100  
18 rainfall of six (6) hours in duration."

19 On page 40, section §47-34-13, by striking out section  
20 13.2 and substituting therefor the following:

21 "Performance Requirements - All dams completed before  
22 July 1, 1973, shall meet the applicable design requirements  
23 of Section 7 of this rule. Those dams which do not meet  
24 the applicable design requirement of Section 7 of this rule

1 shall be modified, breached, removed, or properly abandoned  
2 pursuant to the provisions of this rule. In developing the  
3 required plans, specifications, and documentation necessary  
4 to bring the structure into conformity with section 7 of  
5 this rule, the design engineer may consider in his  
6 submitted analyses, peculiarities and local conditions for  
7 each impounding structure with recognition of the many  
8 factors involved, some of which may not be precisely known.  
9 Existing construction documentation and the historical  
10 performance of the structure including documented storms  
11 and spillway flows may be considered by the engineer as  
12 part of the evaluation of the structure. Upon approval by  
13 the Director of the plans, specifications, and  
14 documentation submitted by the engineer, the Director may  
15 issue a certificate of approval."

16 (m) The legislative rules filed in the state register  
17 on the fifteenth day of August, one thousand nine hundred  
18 ninety-four, authorized under the authority of section  
19 fifteen, article one, chapter twenty-two, of this code,  
20 modified by the division of environmental protection to  
21 meet the objections of the legislative rule-making review  
22 committee and refiled in the state register on the eleventh  
23 day of January, one thousand nine hundred ninety-five,  
24 relating to the division of environmental protection

1 (regulations governing environmental laboratories  
2 certification and standards of performance, 47 CSR 32), are  
3 authorized.

4 (n) The legislative rules filed in the state register  
5 on the twenty-eighth day of February, one thousand nine  
6 hundred ninety-four, authorized under the authority of  
7 section three, article two, chapter twenty-two-c, of this  
8 code, modified by the division of environmental protection  
9 to meet the objections of the legislative rule-making  
10 review committee and refiled in the state register on the  
11 twenty-eighth day of July, one thousand nine hundred  
12 ninety-four, relating to the division of environmental  
13 protection (state water pollution control revolving fund  
14 program, 47 CSR 31), are authorized.

15 (o) The legislative rules filed in the state register  
16 on the fifteenth day of August, one thousand nine hundred  
17 ninety-four, authorized under the authority of section six,  
18 article seventeen, chapter twenty-two, of this code,  
19 relating to the division of environmental protection  
20 (underground storage tanks, 47 CSR 36), are authorized.

21 (p) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section six,  
24 article eighteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the  
4 thirteenth day of January, one thousand nine hundred  
5 ninety-five, relating to the division of environmental  
6 protection (hazardous waste management regulations, 47 CSR  
7 35), are authorized.

8 (q) The legislative rules filed in the state register  
9 on the twenty-second day of July, one thousand nine hundred  
10 ninety-four, authorized under the authority of section  
11 four, article three, chapter twenty-two, of this code,  
12 modified by the division of environmental protection to  
13 meet the objections of the legislative rule-making review  
14 committee and refiled in the state register on the  
15 twenty-ninth day of August, one thousand nine hundred  
16 ninety-four, relating to the division of environmental  
17 protection (standards for certification of blasters-surface  
18 coal mines, 38 CSR 2C), are authorized with the amendments  
19 set forth below:

20 On page 4, section 38.2C.4, after the words "Form  
21 MR-30-TR." by inserting a second paragraph to read as  
22 follows:

23 "In lieu of completing the training program, the  
24 applicant for certification or re-certification may

1 complete a self-study course using the study guide and  
2 other materials available from the Division of  
3 Environmental Protection."

4 On page 8, subsection 8.2, after the words "refresher  
5 training course" by inserting the phrase "or complete the  
6 self-study course."

7 On page 8 at subsection 10.1 by striking out the  
8 phrase "a cessation order and/or take other action as  
9 provided in West Virginia Code 22-3-16 and 17" and the  
10 phrase "the provisions of West Virginia Code 22-3-1 et  
11 seq., rules promulgated under that article, or".

12 On page 9, subsection 11.1, by striking out the  
13 subsection and inserting in lieu thereof a new subsection  
14 to read as follows: "11.1. **Suspension** - Upon service of a  
15 written notice of violation by the Director to a certified  
16 blaster, the Director may suspend his or her certification.  
17 Prior to the issuance of such an order, the certified  
18 blaster shall be granted a hearing before the Director to  
19 show cause why his or her certification should not be  
20 suspended."

21 On page 9, subsection 11.2, by striking out the phrase  
22 "or cessation order" in the first sentence.

23 On page 9, Section 12, by striking out the phrase  
24 "cessation order".



1       (r) The legislative rules filed in the state register  
2 on the fifteenth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 nine, article three, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the sixth  
8 day of January, one thousand nine hundred ninety-five,  
9 relating to the division of environmental protection (rules  
10 and regulations relating to abandoned mine lands and  
11 reclamation, 38 CSR 2D), are authorized.

12       (s) The Legislature hereby authorizes and directs the  
13 division of environmental protection to promulgate the  
14 legislative rules filed in the state register on February,  
15 seventh, one thousand nine hundred ninety-five, authorized  
16 under the authority of section five, article twenty,  
17 chapter sixteen, of this code, relating to the prevention  
18 and control of particulate air pollution from combustion of  
19 fuel in indirect heat exchangers, 45 CSR 2, effective the  
20 \* day of \*, one thousand nine hundred ninety-five, with the  
21 amendments set forth below:  
22 On page eight, section 3.4(e) after the word "operated" by  
23 adding the words "at normal operating loads";  
24 And,

1 On page thirteen, section 9.4 by striking the words  
2 "monthly or", and, following the words "quarterly basis" by  
3 striking the word "as"; and by inserting the words "unless  
4 otherwise" following the words "quarterly basis".

5 And,

6 On page thirteen, by creating a new section, designated  
7 section "45.2.10. Variances.

8 10.1. In the event of an unavoidable shortage of fuel  
9 having characteristics or specifications necessary for a  
10 fuel burning unit to comply with the opacity standards set  
11 forth in section 3 or any emergency situation or condition  
12 creating a threat to public safety or welfare, the Director  
13 may grant an exception to the otherwise applicable visible  
14 emission standards for a period not to exceed fifteen (15)  
15 days, provided that visible emissions during the exception  
16 period do not exceed a maximum six (6) minute average of  
17 thirty (30) percent and that a reasonable demonstration is  
18 made by the owner or operator that the emission standards  
19 under section 4 of this rule will not be exceeded during  
20 the exemption period."

21 10.2. In the event a fuel burning unit employing a  
22 flue gas desulphurization system must by-pass such system  
23 because of necessary planned or unplanned maintenance,  
24 visible emissions may not exceed twenty percent (20%)

1 opacity during such period of maintenance. The Director  
2 may require advance notice of necessary planned  
3 maintenance, including a description of the necessity of  
4 the maintenance activity and its expected duration and may  
5 limit the duration of the variance or the amount of the  
6 excess opacity exception herein allowed. The Director  
7 shall be notified of unplanned maintenance and may limit  
8 the duration of the variance or the amount of excess  
9 opacity exception allowed during unplanned maintenance.

10 And, by renumbering subsequent sections.

11 (t) The legislative rules filed in the state register  
12 on the nineteenth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article three, chapter twenty-two, of this code,  
15 relating to the division of environmental protection  
16 (surface mining and reclamation regulations, 38 CSR 2), are  
17 authorized "with the amendments set forth below"

18 On pages 2 and 3, by striking out subsections 1.6, 1.7  
19 and 1.8 in their entirety;

20 On page 6, by inserting a new subsection 2.20, to read  
21 as follows, and renumbering subsequent subsections;

22 "Chemical Treatment means - the treatment of water  
23 from a surface coal mining operation using chemical  
24 reagents such as but not limited to sodium hydroxide,

1 calcium carbonate, or anhydrous ammonia for purposes of  
2 meeting applicable state and federal effluent limitations.  
3 Chemical treatment does not include passive treatment  
4 systems such as but not limited to limestone drains,  
5 wetlands, alkaline addition, application of flyash,  
6 agricultural lime, or injection of flyash, limestone, or  
7 other minerals into underground coal operations."

8       On page 16, section 2, by striking out subsection 2.92  
9 and renumbering the subsequent subsections.

10       On page 25, by striking the second paragraph of  
11 subsection 3.1 (o) and inserting in lieu thereof a new  
12 second paragraph 3.1 of subsection 3.1 (o), to read as  
13 follows: "Any permit application which references an  
14 approved centralized ownership and control file may be  
15 determined to be complete and accurate for the purposes of  
16 this subsection. Each centralized ownership and control  
17 file shall at a minimum:"

18       On page 63, by striking out subsection 3.25 (e).

19       On page 63, by striking out the first sentence in  
20 subsection 3.26, and inserting in lieu thereof the  
21 following:

22       "(a) All changes including name changes, replacements,  
23 and additions to the ownership or control data relative to  
24 a permittee or assignee who will function as an operator

1 pursuant to the provisions of paragraph (c) of subsection  
2 3.25 of this rule shall be reported to the Director."

3 On page 64, after subsection 3.26 (a) (5) by inserting  
4 a new subsection 3.26 (a) (6) to read as follows:

5 "(6) In the event that a permittee or operator has  
6 incurred no changes in its ownership and control  
7 information and therefore has not been obligated to file  
8 a report within any consecutive twelve-month period, that  
9 permittee or operator is required to notify the Director in  
10 writing that no changes to the information required by  
11 paragraphs (b), (c), (d) and (i) of subsection 3.1 of this  
12 rule have occurred."

13 On page 64, by striking out subsection 3.27 (a) and  
14 inserting in lieu thereof the following:

15 "(a) All active surface mining operations shall be  
16 subject to the renewal requirements and provisions for  
17 issuance of a renewal discussed in Section 19 of the Act:  
18 Provided, That the Director may waive the requirement for  
19 renewal if the permittee certifies in writing that all coal  
20 extraction is completed, that all backfilling and regrading  
21 will be completed within sixty (60) days prior to the  
22 expiration date of the permit, and that an application for  
23 Phase I bond release will be filed prior to the expiration  
24 date of the permit. Failure of the permittee complete

1 backfilling and regrading within sixty (60) days prior to  
2 the expiration date of the permit will nullify the waiver.

3 Those operations which have been granted inactive  
4 status in accordance with subsection 14.11 of this rule  
5 shall also be subject to the renewal requirements of  
6 Section 19 of the Act.

7 Applications for renewal shall be filed on forms  
8 provided by the Director and shall contain at a minimum the  
9 following information:"

10 On page 79, by striking out subsection 3.32 (i) and  
11 renumbering the remaining subsections.

12 On page 80, subsection 3.34 (b) after the word  
13 "criteria" by inserting the words "paragraph (b) of  
14 subsection 3.32 of this section";

15 On page 80, by striking out subsection 3.34 (b) (3)  
16 and substituting therefor a new subsection 3.34 (b) (3), to  
17 read as follows: "(3) The permittee was linked to a  
18 violation, penalty or fee through ownership or control,  
19 under the violation review criteria, paragraph (b) of  
20 subsection 3.32 of this section at the time the permit was  
21 issued and an ownership or control link between the  
22 permittee and the person responsible for the violation,  
23 penalty or fee still exists, or when the link was severed  
24 the permittee continues to be responsible for the

1 violation, penalty or fee."

2 On page 82, by striking out subsection 3.34 (g) and  
3 substituting therefor a new subparagraph (g) to read as  
4 follows:

5 "(g) For purposes of this subsection, a permit is  
6 issued when it is originally approved, as well as when a  
7 transfer, assignment, or sale of permit rights is approved  
8 pursuant to paragraphs (a) or (c), subsection 3.25 of this  
9 rule, or where a permit is revised pursuant to subsection  
10 3.26 of this rule."

11 On page 86, at the end of subsection 4.4, by adding  
12 the following sentence: "Prospecting roads are to be  
13 designed, constructed, maintained, and reclaimed in  
14 accordance with the provisions of subsection 13.6 of this  
15 rule."

16 On page 88, by inserting a new subsection 4.7 (a) (1)  
17 to read as follows: (1) Minimize downstream sedimentation  
18 and flooding and renumbering the remaining subsections.

19 On page 92, subsection 4.12, by inserting a new  
20 sentence between the second and third sentence which reads  
21 as follows: "Where the certification statement indicates a  
22 change from the design standards or construction  
23 requirements approved in the permit, such changes will be  
24 documented in as-built plans and submitted for approval to



1 the Director as a permit revision."

2 On Page 146, section 11.6 (a) in the underscored  
3 language, after the word, "completed" by inserting the  
4 words "or nearly completed".

5 On Page 223, by striking out subsection 14.14 (g) (8)  
6 and inserting in lieu thereof a new subsection 14.14 (g)  
7 (8), to read as follows: "(8) Surface water runoff from  
8 areas above and adjacent to the fill shall be diverted into  
9 properly designed and constructed stabilized diversion  
10 channels which have been designed using best current  
11 technology to safely pass the peak runoff from a 100 year,  
12 24-hour precipitation event. The channel shall be designed  
13 and constructed to ensure stability of the fill, control  
14 erosion, and minimize water infiltration into the fill."

15 On Page 232, by inserting a new subsection, designated  
16 subsection 14.19 (d) to read as follows: "(d) Timber from  
17 clearing and grubbing operations may be wind-rowed below  
18 the projected toe of the outslope in a manner that will  
19 provide shelter and habitat for game and non-game wildlife  
20 and provide for enhanced sediment control. These materials  
21 may not be placed in natural water courses or where they  
22 will be covered by spoil material at the toe of the  
23 outslope. The wind-rows must be of relatively uniform  
24 height and width and must be more or less evenly

1 distributed along the lower reaches and within the permit  
2 area."

3       On Page 240, subsection 17.1, in the first sentence,  
4 after the words "mining and reclamation," by striking out  
5 the remainder of the paragraph and substituting therefor  
6 the following: "required by the Act and these Rules,  
7 including the engineering analyses and designs; the  
8 development of cross-section maps and plans; the geologic  
9 drilling and statement of results of test borings and core  
10 samplings; preblast surveys; the collection of  
11 site-specific resource information and production of  
12 protection and enhancement plans for fish and wildlife  
13 habitats and other environmental values; and the collection  
14 of archaeological and historical information; and any other  
15 archaeological and historical information required by the  
16 federal department of the interior and the preparation of  
17 plans that may be necessitated thereby; and the director  
18 shall provide or assume the cost of training coal operators  
19 that meet the qualifications concerning the preparation of  
20 permit applications and compliance with the regulatory  
21 program, and shall ensure that qualified coal operators are  
22 aware of the assistance available under this section.

23       On Page 240, subsection 17.1, after the first  
24 paragraph by inserting a new paragraph, to read as follows:

1 "The Director will develop a procedure for the interstate  
2 coordination and exchange of information collected under  
3 the Small Operators Assistance Program."

4 On Page 241, by striking out subsection 17.4 in its  
5 entirety and substituting therefor the following: "17.4  
6 Request for Assistance. Each applicant requesting  
7 assistance shall provide information on forms provided by  
8 the director in an application that shall be clear and  
9 concise and shall be provided in a format prescribed by the  
10 Director and/or a format required by the Federal Office of  
11 Surface Mining Reclamation and Enforcement."

12 On Page 249, subsection 17.7 (a) (4), after the words  
13 "twelve (12) month period" by striking the remainder of the  
14 sentence and inserting in lieu thereof the words  
15 "immediately following permit issuance."

16 On page 273, subsection 20.6 (a), after the word  
17 "first" by striking out the words "thirty (30)" and  
18 inserting in lieu thereof the word "fifteen".

19 On page 273, subsection 20.6 (c), after the words  
20 "date of the" by striking out the words "Assessment Officer  
21 receiving the  
22 finding specified in paragraph (a) of this subsection." and  
23 inserting in lieu thereof the words "issuance of a notice  
24 or order";

1 or order";

2 On page 274, subsection 20.6 (d), by striking out the  
3 first sentence, and inserting in lieu thereof the  
4 following: "The time and place of an informal assessment  
5 conference shall be posted at the Department of  
6 Environmental Protection Office nearest to the operation.

7 (u) The legislative rules filed in the state register  
8 on the thirty-first day of July, one thousand nine hundred  
9 ninety-five, authorized under the authority of section  
10 five, article fifteen, chapter twenty-two, of this code,  
11 modified by the division of environmental protection to  
12 meet the objections of the legislative rule-making review  
13 committee and refiled in the state register on the twenty-  
14 fourth day of January, one thousand nine hundred  
15 ninety-six, relating to the division of environmental  
16 protection (solid waste management, 47 CSR 38), are  
17 authorized.

18

19 NOTE: The purpose of this bill is to authorize the  
20 Division of Environmental Protection to promulgate  
21 legislative rules relating to solid waste management.

22

23 Strike-throughs indicate language that would be  
24 stricken from the present law, and underscoring indicates  
25 new language that would be added.

2.

8

8

1           SENATE BILL NO. 179

2           (By Senators Ross, Anderson, Boley,  
3           Buckalew, Grubb and Macnaughtan)

4           [Introduced January 29, 1996; referred  
5           to the Committee on

6           NATURAL RESOURCES  
7           THE JUDICIARY  
8  
9

47-38

10 A BILL to amend and reenact section one, article three,  
11 chapter sixty-four of the code of West Virginia, one  
12 thousand nine hundred thirty-one, as amended, relating  
13 to authorizing the division of environmental  
14 protection to promulgate legislative rules relating to  
15 solid waste management.

16 Be it enacted by the Legislature of West Virginia:

17 That section one, article three, chapter sixty-four of  
18 the code of West Virginia, one thousand nine hundred  
19 thirty-one, as amended, be amended and reenacted, to read  
20 as follows:

21 ARTICLE 3. AUTHORIZATION FOR BUREAU OF ENVIRONMENT TO  
22 PROMULGATE LEGISLATIVE RULES.

23 §64-3-1. Division of environmental protection.

24 (a) The legislative rules filed in the state register

1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 four, article five, chapter twenty-two, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (requirements for determining conformity of  
10 general federal actions to applicable air quality  
11 implementation plans (general conformity), 45 CSR 35), are  
12 authorized.

13 (b) The legislative rules filed in the state register  
14 on the twelfth day of August, one thousand nine hundred  
15 ninety-four, authorized under the authority of section  
16 four, article five, chapter twenty-two, of this code,  
17 modified by the division of environmental protection to  
18 meet the objections of the legislative rule-making review  
19 committee and refiled in the state register on the  
20 twenty-third day of November, one thousand nine hundred  
21 ninety-four, relating to the division of environmental  
22 protection (emission standards for hazardous air pollutants  
23 pursuant to 40 CFR Part 63, 45 CSR 34), are authorized.

24 (c) The legislative rules filed in the state register



1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 five, article twenty, chapter sixteen, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (standards of performance for new stationary  
10 sources, 45 CSR 16), are authorized with the amendment set  
11 forth below:

12 "On page two, section 4, subsection 4.1, subdivision  
13 4.1.i, by striking out 'Part 60.195(b)' and inserting in  
14 lieu thereof 'Part 60.194(d)';

15 On page two, section 4, subsection 4.1., subdivision  
16 4.1.k, by striking out 'Part 60.335(a)(1)(i)' and inserting  
17 in lieu thereof 'Part 60.335(f)(1)';

18 And,

19 On page two, section 4, after subdivision 'k', by  
20 inserting a new subdivision to read as follows:

21 '1. Part 60.335(f)(1).'"

22 (d) The legislative rules filed in the state register  
23 on the fifteenth day of August, one thousand nine hundred  
24 ninety-four, authorized under the authority of section

1 four, article five, chapter twenty-two, of this code,  
2 modified by the division of environmental protection to  
3 meet the objections of the legislative rule-making review  
4 committee and refiled in the state register on the  
5 nineteenth day of December, one thousand nine hundred  
6 ninety-four, relating to the division of environmental  
7 protection (permits for construction and major modification  
8 of major stationary sources of air pollution for the  
9 prevention of significant deterioration, 45 CSR 14), are  
10 authorized.

11 (e) The legislative rules filed in the state register  
12 on the twelfth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article five, chapter twenty-two, of this code,  
15 modified by the division of environmental protection to  
16 meet the objections of the legislative rule-making review  
17 committee and refiled in the state register on the  
18 twenty-third day of November, one thousand nine hundred  
19 ninety-four, relating to the division of environmental  
20 protection (requirements for determining conformity of  
21 transportation plans, programs and projects developed,  
22 funded or approved under title 23 U.S.C. or the federal  
23 transit act, to applicable air quality implementation  
24 plans, 45 CSR 36), are authorized.

1       (f) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the twenty-  
8 ninth day of December, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (to prevent and control air pollution from the  
11 operation of coal preparation plants and coal handling  
12 operations, 45 CSR 5), are authorized.

13       (g) The legislative rules filed in the state register  
14 on the thirteenth day of September, one thousand nine  
15 hundred ninety-four, authorized under the authority of  
16 section four, article five, chapter twenty-two, of this  
17 code, modified by the division of environmental protection  
18 to meet the objections of the legislative rule-making  
19 review committee and refiled in the state register on the  
20 twelfth day of January, one thousand nine hundred  
21 ninety-five, relating to the division of environmental  
22 protection (to prevent and control air pollution from  
23 hazardous waste treatment, storage or disposal facilities,  
24 45 CSR 25), are authorized.

1       (h) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the  
8 twenty-third day of November, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (acid rain provisions and permits, 45 CSR 33),  
11 are authorized.

12       (i) The legislative rules filed in the state register  
13 on the twelfth day of August, one thousand nine hundred  
14 ninety-four, authorized under the authority of section two,  
15 article one, chapter twenty-two, of this code, modified by  
16 the division of environmental protection to meet the  
17 objections of the legislative rule-making review committee  
18 and refiled in the state register on the twenty-third day  
19 of November, one thousand nine hundred ninety-four,  
20 relating to the division of environmental protection  
21 (emission standards for hazardous air pollutants pursuant  
22 to 40 CFR Part 61, 45 CSR 15), are authorized.

23       (j) The legislative rules filed in the state register  
24 on the twelfth day of August, one thousand nine hundred

1 ninety-four, authorized under the authority of section  
2 four, article five, chapter twenty-two, of this code,  
3 modified by the division of environmental protection to  
4 meet the objections of the legislative rule-making review  
5 committee and refiled in the state register on the  
6 twenty-third day of November, one thousand nine hundred  
7 ninety-four, relating to the division of environmental  
8 protection (provisions for determination of compliance with  
9 air quality management rules, 45 CSR 38), are authorized.

10 (k) The legislative rules filed in the state register  
11 on the twelfth day of August, one thousand nine hundred  
12 ninety-four, authorized under the authority of section  
13 five, article twenty, chapter sixteen, of this code,  
14 modified by the division of environmental protection to  
15 meet the objections of the legislative rule-making review  
16 committee and refiled in the state register on the  
17 twenty-third day of November, one thousand nine hundred  
18 ninety-four, relating to the division of environmental  
19 protection (to prevent and control air pollution from  
20 combustion of refuse, 45 CSR 6), are authorized.

21 (l) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section  
24 four, article fourteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the fourth  
4 day of January, one thousand nine hundred ninety-five,  
5 relating to the division of environmental protection (dam  
6 safety, 47 CSR 34), are authorized with the amendments set  
7 forth below:

8       On page 9, section §47-34-3, by striking out  
9 3.5.2.c.A, and substituting therefor the following:

10       "3.5.2.c.A. An impoundment exceeding forty (40) feet  
11 in height or four hundred (400) acre-feet storage volume  
12 shall not be classified as a Class 3 dam."

13       On pages 17 and 18, section §47-34-7, at the end of  
14 section 7.1.1.b.C. by adding the following:

15       "The design precipitation for a Class 3 dam may be  
16 reduced based on Risk Assessment pursuant to paragraph  
17 3.5.4 of this rule, but in no case to less than a P100  
18 rainfall of six (6) hours in duration."

19       On page 40, section §47-34-13, by striking out section  
20 13.2 and substituting therefor the following:

21       "Performance Requirements - All dams completed before  
22 July 1, 1973, shall meet the applicable design requirements  
23 of Section 7 of this rule. Those dams which do not meet  
24 the applicable design requirement of Section 7 of this rule

1 shall be modified, breached, removed, or properly abandoned  
2 pursuant to the provisions of this rule. In developing the  
3 required plans, specifications, and documentation necessary  
4 to bring the structure into conformity with section 7 of  
5 this rule, the design engineer may consider in his  
6 submitted analyses, peculiarities and local conditions for  
7 each impounding structure with recognition of the many  
8 factors involved, some of which may not be precisely known.  
9 Existing construction documentation and the historical  
10 performance of the structure including documented storms  
11 and spillway flows may be considered by the engineer as  
12 part of the evaluation of the structure. Upon approval by  
13 the Director of the plans, specifications, and  
14 documentation submitted by the engineer, the Director may  
15 issue a certificate of approval."

16 (m) The legislative rules filed in the state register  
17 on the fifteenth day of August, one thousand nine hundred  
18 ninety-four, authorized under the authority of section  
19 fifteen, article one, chapter twenty-two, of this code,  
20 modified by the division of environmental protection to  
21 meet the objections of the legislative rule-making review  
22 committee and refiled in the state register on the eleventh  
23 day of January, one thousand nine hundred ninety-five,  
24 relating to the division of environmental protection



1 (regulations governing environmental laboratories  
2 certification and standards of performance, 47 CSR 32), are  
3 authorized.

4 (n) The legislative rules filed in the state register  
5 on the twenty-eighth day of February, one thousand nine  
6 hundred ninety-four, authorized under the authority of  
7 section three, article two, chapter twenty-two-c, of this  
8 code, modified by the division of environmental protection  
9 to meet the objections of the legislative rule-making  
10 review committee and refiled in the state register on the  
11 twenty-eighth day of July, one thousand nine hundred  
12 ninety-four, relating to the division of environmental  
13 protection (state water pollution control revolving fund  
14 program, 47 CSR 31), are authorized.

15 (o) The legislative rules filed in the state register  
16 on the fifteenth day of August, one thousand nine hundred  
17 ninety-four, authorized under the authority of section six,  
18 article seventeen, chapter twenty-two, of this code,  
19 relating to the division of environmental protection  
20 (underground storage tanks, 47 CSR 36), are authorized.

21 (p) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section six,  
24 article eighteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the  
4 thirteenth day of January, one thousand nine hundred  
5 ninety-five, relating to the division of environmental  
6 protection (hazardous waste management regulations, 47 CSR  
7 35), are authorized.

8 (q) The legislative rules filed in the state register  
9 on the twenty-second day of July, one thousand nine hundred  
10 ninety-four, authorized under the authority of section  
11 four, article three, chapter twenty-two, of this code,  
12 modified by the division of environmental protection to  
13 meet the objections of the legislative rule-making review  
14 committee and refiled in the state register on the  
15 twenty-ninth day of August, one thousand nine hundred  
16 ninety-four, relating to the division of environmental  
17 protection (standards for certification of blasters-surface  
18 coal mines, 38 CSR 2C), are authorized with the amendments  
19 set forth below:

20 On page 4, section 38.2C.4, after the words "Form  
21 MR-30-TR." by inserting a second paragraph to read as  
22 follows:

23 "In lieu of completing the training program, the  
24 applicant for certification or re-certification may

1 complete a self-study course using the study guide and  
2 other materials available from the Division of  
3 Environmental Protection."

4 On page 8, subsection 8.2, after the words "refresher  
5 training course" by inserting the phrase "or complete the  
6 self-study course."

7 On page 8 at subsection 10.1 by striking out the  
8 phrase "a cessation order and/or take other action as  
9 provided in West Virginia Code 22-3-16 and 17" and the  
10 phrase "the provisions of West Virginia Code 22-3-1 et  
11 seq., rules promulgated under that article, or".

12 On page 9, subsection 11.1, by striking out the  
13 subsection and inserting in lieu thereof a new subsection  
14 to read as follows: "11.1. **Suspension** - Upon service of a  
15 written notice of violation by the Director to a certified  
16 blaster, the Director may suspend his or her certification.  
17 Prior to the issuance of such an order, the certified  
18 blaster shall be granted a hearing before the Director to  
19 show cause why his or her certification should not be  
20 suspended."

21 On page 9, subsection 11.2, by striking out the phrase  
22 "or cessation order" in the first sentence.

23 On page 9, Section 12, by striking out the phrase  
24 "cessation order".

1       (r) The legislative rules filed in the state register  
2 on the fifteenth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 nine, article three, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the sixth  
8 day of January, one thousand nine hundred ninety-five,  
9 relating to the division of environmental protection (rules  
10 and regulations relating to abandoned mine lands and  
11 reclamation, 38 CSR 2D), are authorized.

12       (s) The Legislature hereby authorizes and directs the  
13 division of environmental protection to promulgate the  
14 legislative rules filed in the state register on February,  
15 seventh, one thousand nine hundred ninety-five, authorized  
16 under the authority of section five, article twenty,  
17 chapter sixteen, of this code, relating to the prevention  
18 and control of particulate air pollution from combustion of  
19 fuel in indirect heat exchangers, 45 CSR 2, effective the  
20 \* day of \*, one thousand nine hundred ninety-five, with the  
21 amendments set forth below:  
22 On page eight, section 3.4(e) after the word "operated" by  
23 adding the words "at normal operating loads";  
24 And,

1 On page thirteen, section 9.4 by striking the words  
2 "monthly or", and, following the words "quarterly basis" by  
3 striking the word "as"; and by inserting the words "unless  
4 otherwise" following the words "quarterly basis".

5 And,

6 On page thirteen, by creating a new section, designated  
7 section "45.2.10. Variances.

8 10.1. In the event of an unavoidable shortage of fuel  
9 having characteristics or specifications necessary for a  
10 fuel burning unit to comply with the opacity standards set  
11 forth in section 3 or any emergency situation or condition  
12 creating a threat to public safety or welfare, the Director  
13 may grant an exception to the otherwise applicable visible  
14 emission standards for a period not to exceed fifteen (15)  
15 days, provided that visible emissions during the exception  
16 period do not exceed a maximum six (6) minute average of  
17 thirty (30) percent and that a reasonable demonstration is  
18 made by the owner or operator that the emission standards  
19 under section 4 of this rule will not be exceeded during  
20 the exemption period."

21 10.2. In the event a fuel burning unit employing a  
22 flue gas desulphurization system must by-pass such system  
23 because of necessary planned or unplanned maintenance,  
24 visible emissions may not exceed twenty percent (20%)

1 opacity during such period of maintenance. The Director  
2 may require advance notice of necessary planned  
3 maintenance, including a description of the necessity of  
4 the maintenance activity and its expected duration and may  
5 limit the duration of the variance or the amount of the  
6 excess opacity exception herein allowed. The Director  
7 shall be notified of unplanned maintenance and may limit  
8 the duration of the variance or the amount of excess  
9 opacity exception allowed during unplanned maintenance.

10 And, by renumbering subsequent sections.

11 (t) The legislative rules filed in the state register  
12 on the nineteenth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article three, chapter twenty-two, of this code,  
15 relating to the division of environmental protection  
16 (surface mining and reclamation regulations, 38 CSR 2), are  
17 authorized "with the amendments set forth below"

18 On pages 2 and 3, by striking out subsections 1.6, 1.7  
19 and 1.8 in their entirety;

20 On page 6, by inserting a new subsection 2.20, to read  
21 as follows, and renumbering subsequent subsections;

22 "Chemical Treatment means - the treatment of water  
23 from a surface coal mining operation using chemical  
24 reagents such as but not limited to sodium hydroxide,

1 calcium carbonate, or anhydrous ammonia for purposes of  
2 meeting applicable state and federal effluent limitations.  
3 Chemical treatment does not include passive treatment  
4 systems such as but not limited to limestone drains,  
5 wetlands, alkaline addition, application of flyash,  
6 agricultural lime, or injection of flyash, limestone, or  
7 other minerals into underground coal operations."

8       On page 16, section 2, by striking out subsection 2.92  
9 and renumbering the subsequent subsections.

10       On page 25, by striking the second paragraph of  
11 subsection 3.1 (o) and inserting in lieu thereof a new  
12 second paragraph 3.1 of subsection 3.1 (o), to read as  
13 follows: "Any permit application which references an  
14 approved centralized ownership and control file may be  
15 determined to be complete and accurate for the purposes of  
16 this subsection. Each centralized ownership and control  
17 file shall at a minimum:"

18       On page 63, by striking out subsection 3.25 (e).

19       On page 63, by striking out the first sentence in  
20 subsection 3.26, and inserting in lieu thereof the  
21 following:

22       "(a) All changes including name changes, replacements,  
23 and additions to the ownership or control data relative to  
24 a permittee or assignee who will function as an operator



1 pursuant to the provisions of paragraph (c) of subsection  
2 3.25 of this rule shall be reported to the Director."

3 On page 64, after subsection 3.26 (a) (5) by inserting  
4 a new subsection 3.26 (a) (6) to read as follows:

5 "(6) In the event that a permittee or operator has  
6 incurred no changes in its ownership and control  
7 information and therefore has not been obligated to file  
8 a report within any consecutive twelve-month period, that  
9 permittee or operator is required to notify the Director in  
10 writing that no changes to the information required by  
11 paragraphs (b), (c), (d) and (i) of subsection 3.1 of this  
12 rule have occurred."

13 On page 64, by striking out subsection 3.27 (a) and  
14 inserting in lieu thereof the following:

15 "(a) All active surface mining operations shall be  
16 subject to the renewal requirements and provisions for  
17 issuance of a renewal discussed in Section 19 of the Act:  
18 *Provided*, That the Director may waive the requirement for  
19 renewal if the permittee certifies in writing that all coal  
20 extraction is completed, that all backfilling and regrading  
21 will be completed within sixty (60) days prior to the  
22 expiration date of the permit, and that an application for  
23 Phase I bond release will be filed prior to the expiration  
24 date of the permit. Failure of the permittee complete

1 backfilling and regrading within sixty (60) days prior to  
2 the expiration date of the permit will nullify the waiver.

3 Those operations which have been granted inactive  
4 status in accordance with subsection 14.11 of this rule  
5 shall also be subject to the renewal requirements of  
6 Section 19 of the Act.

7 Applications for renewal shall be filed on forms  
8 provided by the Director and shall contain at a minimum the  
9 following information:"

10 On page 79, by striking out subsection 3.32 (i) and  
11 renumbering the remaining subsections.

12 On page 80, subsection 3.34 (b) after the word  
13 "criteria" by inserting the words "paragraph (b) of  
14 subsection 3.32 of this section";

15 On page 80, by striking out subsection 3.34 (b) (3)  
16 and substituting therefor a new subsection 3.34 (b) (3), to  
17 read as follows: "(3) The permittee was linked to a  
18 violation, penalty or fee through ownership or control,  
19 under the violation review criteria, paragraph (b) of  
20 subsection 3.32 of this section at the time the permit was  
21 issued and an ownership or control link between the  
22 permittee and the person responsible for the violation,  
23 penalty or fee still exists, or when the link was severed  
24 the permittee continues to be responsible for the

1 violation, penalty or fee."

2 On page 82, by striking out subsection 3.34 (g) and  
3 substituting therefor a new subparagraph (g) to read as  
4 follows:

5 "(g) For purposes of this subsection, a permit is  
6 issued when it is originally approved, as well as when a  
7 transfer, assignment, or sale of permit rights is approved  
8 pursuant to paragraphs (a) or (c), subsection 3.25 of this  
9 rule, or where a permit is revised pursuant to subsection  
10 3.26 of this rule."

11 On page 86, at the end of subsection 4.4, by adding  
12 the following sentence: "Prospecting roads are to be  
13 designed, constructed, maintained, and reclaimed in  
14 accordance with the provisions of subsection 13.6 of this  
15 rule."

16 On page 88, by inserting a new subsection 4.7 (a) (1)  
17 to read as follows: (1) Minimize downstream sedimentation  
18 and flooding and renumbering the remaining subsections.

19 On page 92, subsection 4.12, by inserting a new  
20 sentence between the second and third sentence which reads  
21 as follows: "Where the certification statement indicates a  
22 change from the design standards or construction  
23 requirements approved in the permit, such changes will be  
24 documented in as-built plans and submitted for approval to

1 the Director as a permit revision."

2 On Page 148, section 11.6 (a) in the underscored  
3 language, after the word, "completed" by inserting the  
4 words "or nearly completed".

5 On Page 223, by striking out subsection 14.14 (g) (8)  
6 and inserting in lieu thereof a new subsection 14.14 (g)  
7 (8), to read as follows: "(8) Surface water runoff from  
8 areas above and adjacent to the fill shall be diverted into  
9 properly designed and constructed stabilized diversion  
10 channels which have been designed using best current  
11 technology to safely pass the peak runoff from a 100 year,  
12 24-hour precipitation event. The channel shall be designed  
13 and constructed to ensure stability of the fill, control  
14 erosion, and minimize water infiltration into the fill."

15 On Page 232, by inserting a new subsection, designated  
16 subsection 14.19 (d) to read as follows: "(d) Timber from  
17 clearing and grubbing operations may be wind-rowed below  
18 the projected toe of the outslope in a manner that will  
19 provide shelter and habitat for game and non-game wildlife  
20 and provide for enhanced sediment control. These materials  
21 may not be placed in natural water courses or where they  
22 will be covered by spoil material at the toe of the  
23 outslope. The wind-rows must be of relatively uniform  
24 height and width and must be more or less evenly

1 distributed along the lower reaches and within the permit  
2 area."

3       On Page 240, subsection 17.1, in the first sentence,  
4 after the words "mining and reclamation," by striking out  
5 the remainder of the paragraph and substituting therefor  
6 the following: "required by the Act and these Rules,  
7 including the engineering analyses and designs; the  
8 development of cross-section maps and plans; the geologic  
9 drilling and statement of results of test borings and core  
10 samplings; preblast surveys; the collection of  
11 site-specific resource information and production of  
12 protection and enhancement plans for fish and wildlife  
13 habitats and other environmental values; and the collection  
14 of archaeological and historical information; and any other  
15 archaeological and historical information required by the  
16 federal department of the interior and the preparation of  
17 plans that may be necessitated thereby; and the director  
18 shall provide or assume the cost of training coal operators  
19 that meet the qualifications concerning the preparation of  
20 permit applications and compliance with the regulatory  
21 program, and shall ensure that qualified coal operators are  
22 aware of the assistance available under this section.

23       On Page 240, subsection 17.1, after the first  
24 paragraph by inserting a new paragraph, to read as follows:

1 "The Director will develop a procedure for the interstate  
2 coordination and exchange of information collected under  
3 the Small Operators Assistance Program."

4 On Page 241, by striking out subsection 17.4 in its  
5 entirety and substituting therefor the following: "17.4  
6 Request for Assistance. Each applicant requesting  
7 assistance shall provide information on forms provided by  
8 the director in an application that shall be clear and  
9 concise and shall be provided in a format prescribed by the  
10 Director and/or a format required by the Federal Office of  
11 Surface Mining Reclamation and Enforcement."

12 On Page 249, subsection 17.7 (a) (4), after the words  
13 "twelve (12) month period" by striking the remainder of the  
14 sentence and inserting in lieu thereof the words  
15 "immediately following permit issuance."

16 On page 273, subsection 20.6 (a), after the word  
17 "first" by striking out the words "thirty (30)" and  
18 inserting in lieu thereof the word "fifteen".

19 On page 273, subsection 20.6 (c), after the words  
20 "date of the" by striking out the words "Assessment Officer  
21 receiving the  
22 finding specified in paragraph (a) of this subsection." and  
23 inserting in lieu thereof the words "issuance of a notice  
24 or order";

4243

H. B. 4243

(By Delegates Douglas, Gallagher, Faircloth, Compton,  
Linch and Riggs )  
(Introduced January 29, 1996 ; referred to the  
Committee on the Judiciary .)

47-38

A BILL to amend and reenact section one, article three,  
chapter sixty-four of the code of West Virginia, one  
thousand nine hundred thirty-one, as amended, relating  
to authorizing the division of environmental  
protection to promulgate legislative rules relating to  
solid waste management.

Be it enacted by the Legislature of West Virginia:

That section one, article three, chapter sixty-four of  
the code of West Virginia, one thousand nine hundred  
thirty-one, as amended, be amended and reenacted, to read  
as follows:

**ARTICLE 3. AUTHORIZATION FOR BUREAU OF ENVIRONMENT TO  
PROMULGATE LEGISLATIVE RULES.**

**§64-3-1. Division of environmental protection.**

(a) The legislative rules filed in the state register



1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 four, article five, chapter twenty-two, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (requirements for determining conformity of  
10 general federal actions to applicable air quality  
11 implementation plans (general conformity), 45 CSR 35), are  
12 authorized.

13 (b) The legislative rules filed in the state register  
14 on the twelfth day of August, one thousand nine hundred  
15 ninety-four, authorized under the authority of section  
16 four, article five, chapter twenty-two, of this code,  
17 modified by the division of environmental protection to  
18 meet the objections of the legislative rule-making review  
19 committee and refiled in the state register on the  
20 twenty-third day of November, one thousand nine hundred  
21 ninety-four, relating to the division of environmental  
22 protection (emission standards for hazardous air pollutants  
23 pursuant to 40 CFR Part 63, 45 CSR 34), are authorized.

24 (c) The legislative rules filed in the state register

1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 five, article twenty, chapter sixteen, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (standards of performance for new stationary  
10 sources, 45 CSR 16), are authorized with the amendment set  
11 forth below:

12 "On page two, section 4, subsection 4.1, subdivision  
13 4.1.i, by striking out 'Part 60.195(b)' and inserting in  
14 lieu thereof 'Part 60.194(d)';

15 On page two, section 4, subsection 4.1., subdivision  
16 4.1.k, by striking out 'Part 60.335(a)(1)(i)' and inserting  
17 in lieu thereof 'Part 60.335(f)(1)';

18 And,

19 On page two, section 4, after subdivision 'k', by  
20 inserting a new subdivision to read as follows:

21 'l. Part 60.335(f)(1).'"

22 (d) The legislative rules filed in the state register  
23 on the fifteenth day of August, one thousand nine hundred  
24 ninety-four, authorized under the authority of section

1 four, article five, chapter twenty-two, of this code,  
2 modified by the division of environmental protection to  
3 meet the objections of the legislative rule-making review  
4 committee and refiled in the state register on the  
5 nineteenth day of December, one thousand nine hundred  
6 ninety-four, relating to the division of environmental  
7 protection (permits for construction and major modification  
8 of major stationary sources of air pollution for the  
9 prevention of significant deterioration, 45 CSR 14), are  
10 authorized.

11 (e) The legislative rules filed in the state register  
12 on the twelfth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article five, chapter twenty-two, of this code,  
15 modified by the division of environmental protection to  
16 meet the objections of the legislative rule-making review  
17 committee and refiled in the state register on the  
18 twenty-third day of November, one thousand nine hundred  
19 ninety-four, relating to the division of environmental  
20 protection (requirements for determining conformity of  
21 transportation plans, programs and projects developed,  
22 funded or approved under title 23 U.S.C. or the federal  
23 transit act, to applicable air quality implementation  
24 plans, 45 CSR 36), are authorized.

1       (f) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the twenty-  
8 ninth day of December, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (to prevent and control air pollution from the  
11 operation of coal preparation plants and coal handling  
12 operations, 45 CSR 5), are authorized.

13       (g) The legislative rules filed in the state register  
14 on the thirteenth day of September, one thousand nine  
15 hundred ninety-four, authorized under the authority of  
16 section four, article five, chapter twenty-two, of this  
17 code, modified by the division of environmental protection  
18 to meet the objections of the legislative rule-making  
19 review committee and refiled in the state register on the  
20 twelfth day of January, one thousand nine hundred  
21 ninety-five, relating to the division of environmental  
22 protection (to prevent and control air pollution from  
23 hazardous waste treatment, storage or disposal facilities,  
24 45 CSR 25), are authorized.

1       (h) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the  
8 twenty-third day of November, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (acid rain provisions and permits, 45 CSR 33),  
11 are authorized.

12       (i) The legislative rules filed in the state register  
13 on the twelfth day of August, one thousand nine hundred  
14 ninety-four, authorized under the authority of section two,  
15 article one, chapter twenty-two, of this code, modified by  
16 the division of environmental protection to meet the  
17 objections of the legislative rule-making review committee  
18 and refiled in the state register on the twenty-third day  
19 of November, one thousand nine hundred ninety-four,  
20 relating to the division of environmental protection  
21 (emission standards for hazardous air pollutants pursuant  
22 to 40 CFR Part 61, 45 CSR 15), are authorized.

23       (j) The legislative rules filed in the state register  
24 on the twelfth day of August, one thousand nine hundred

1 ninety-four, authorized under the authority of section  
2 four, article five, chapter twenty-two, of this code,  
3 modified by the division of environmental protection to  
4 meet the objections of the legislative rule-making review  
5 committee and refiled in the state register on the  
6 twenty-third day of November, one thousand nine hundred  
7 ninety-four, relating to the division of environmental  
8 protection (provisions for determination of compliance with  
9 air quality management rules, 45 CSR 38), are authorized.

10 (k) The legislative rules filed in the state register  
11 on the twelfth day of August, one thousand nine hundred  
12 ninety-four, authorized under the authority of section  
13 five, article twenty, chapter sixteen, of this code,  
14 modified by the division of environmental protection to  
15 meet the objections of the legislative rule-making review  
16 committee and refiled in the state register on the  
17 twenty-third day of November, one thousand nine hundred  
18 ninety-four, relating to the division of environmental  
19 protection (to prevent and control air pollution from  
20 combustion of refuse, 45 CSR 6), are authorized.

21 (l) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section  
24 four, article fourteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the fourth  
4 day of January, one thousand nine hundred ninety-five,  
5 relating to the division of environmental protection (dam  
6 safety, 47 CSR 34), are authorized with the amendments set  
7 forth below:

8 On page 9, section §47-34-3, by striking out  
9 3.5.2.c.A, and substituting therefor the following:

10 "3.5.2.c.A. An impoundment exceeding forty (40) feet  
11 in height or four hundred (400) acre-feet storage volume  
12 shall not be classified as a Class 3 dam."

13 On pages 17 and 18, section §47-34-7, at the end of  
14 section 7.1.1.b.C. by adding the following:

15 "The design precipitation for a Class 3 dam may be  
16 reduced based on Risk Assessment pursuant to paragraph  
17 3.5.4 of this rule, but in no case to less than a P100  
18 rainfall of six (6) hours in duration."

19 On page 40, section §47-34-13, by striking out section  
20 13.2 and substituting therefor the following:

21 "Performance Requirements - All dams completed before  
22 July 1, 1973, shall meet the applicable design requirements  
23 of Section 7 of this rule. Those dams which do not meet  
24 the applicable design requirement of Section 7 of this rule

1 shall be modified, breached, removed, or properly abandoned  
2 pursuant to the provisions of this rule. In developing the  
3 required plans, specifications, and documentation necessary  
4 to bring the structure into conformity with section 7 of  
5 this rule, the design engineer may consider in his  
6 submitted analyses, peculiarities and local conditions for  
7 each impounding structure with recognition of the many  
8 factors involved, some of which may not be precisely known.  
9 Existing construction documentation and the historical  
10 performance of the structure including documented storms  
11 and spillway flows may be considered by the engineer as  
12 part of the evaluation of the structure. Upon approval by  
13 the Director of the plans, specifications, and  
14 documentation submitted by the engineer, the Director may  
15 issue a certificate of approval."

16 (m) The legislative rules filed in the state register  
17 on the fifteenth day of August, one thousand nine hundred  
18 ninety-four, authorized under the authority of section  
19 fifteen, article one, chapter twenty-two, of this code,  
20 modified by the division of environmental protection to  
21 meet the objections of the legislative rule-making review  
22 committee and refiled in the state register on the eleventh  
23 day of January, one thousand nine hundred ninety-five,  
24 relating to the division of environmental protection



1 (regulations governing environmental laboratories  
2 certification and standards of performance, 47 CSR 32), are  
3 authorized.

4 (n) The legislative rules filed in the state register  
5 on the twenty-eighth day of February, one thousand nine  
6 hundred ninety-four, authorized under the authority of  
7 section three, article two, chapter twenty-two-c, of this  
8 code, modified by the division of environmental protection  
9 to meet the objections of the legislative rule-making  
10 review committee and refiled in the state register on the  
11 twenty-eighth day of July, one thousand nine hundred  
12 ninety-four, relating to the division of environmental  
13 protection (state water pollution control revolving fund  
14 program, 47 CSR 31), are authorized.

15 (o) The legislative rules filed in the state register  
16 on the fifteenth day of August, one thousand nine hundred  
17 ninety-four, authorized under the authority of section six,  
18 article seventeen, chapter twenty-two, of this code,  
19 relating to the division of environmental protection  
20 (underground storage tanks, 47 CSR 36), are authorized.

21 (p) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section six,  
24 article eighteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the  
4 thirteenth day of January, one thousand nine hundred  
5 ninety-five, relating to the division of environmental  
6 protection (hazardous waste management regulations, 47 CSR  
7 35), are authorized.

8 (q) The legislative rules filed in the state register  
9 on the twenty-second day of July, one thousand nine hundred  
10 ninety-four, authorized under the authority of section  
11 four, article three, chapter twenty-two, of this code,  
12 modified by the division of environmental protection to  
13 meet the objections of the legislative rule-making review  
14 committee and refiled in the state register on the  
15 twenty-ninth day of August, one thousand nine hundred  
16 ninety-four, relating to the division of environmental  
17 protection (standards for certification of blasters-surface  
18 coal mines, 38 CSR 2C), are authorized with the amendments  
19 set forth below:

20 On page 4, section 38.2C.4, after the words "Form  
21 MR-30-TR." by inserting a second paragraph to read as  
22 follows:

23 "In lieu of completing the training program, the  
24 applicant for certification or re-certification may

1 complete a self-study course using the study guide and  
2 other materials available from the Division of  
3 Environmental Protection."

4 On page 8, subsection 8.2, after the words "refresher  
5 training course" by inserting the phrase "or complete the  
6 self-study course."

7 On page 8 at subsection 10.1 by striking out the  
8 phrase "a cessation order and/or take other action as  
9 provided in West Virginia Code 22-3-16 and 17" and the  
10 phrase "the provisions of West Virginia Code 22-3-1 et  
11 seq., rules promulgated under that article, or".

12 On page 9, subsection 11.1, by striking out the  
13 subsection and inserting in lieu thereof a new subsection  
14 to read as follows: "11.1. **Suspension** - Upon service of a  
15 written notice of violation by the Director to a certified  
16 blaster, the Director may suspend his or her certification.  
17 Prior to the issuance of such an order, the certified  
18 blaster shall be granted a hearing before the Director to  
19 show cause why his or her certification should not be  
20 suspended."

21 On page 9, subsection 11.2, by striking out the phrase  
22 "or cessation order" in the first sentence.

23 On page 9, Section 12, by striking out the phrase  
24 "cessation order".

1       (r) The legislative rules filed in the state register  
2 on the fifteenth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 nine, article three, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the sixth  
8 day of January, one thousand nine hundred ninety-five,  
9 relating to the division of environmental protection (rules  
10 and regulations relating to abandoned mine lands and  
11 reclamation, 38 CSR 2D), are authorized.

12       (s) The Legislature hereby authorizes and directs the  
13 division of environmental protection to promulgate the  
14 legislative rules filed in the state register on February,  
15 seventh, one thousand nine hundred ninety-five, authorized  
16 under the authority of section five, article twenty,  
17 chapter sixteen, of this code, relating to the prevention  
18 and control of particulate air pollution from combustion of  
19 fuel in indirect heat exchangers, 45 CSR 2, effective the  
20 \* day of \*, one thousand nine hundred ninety-five, with the  
21 amendments set forth below:  
22 On page eight, section 3.4(e) after the word "operated" by  
23 adding the words "at normal operating loads";  
24 And,

1 On page thirteen, section 9.4 by striking the words  
2 "monthly or", and, following the words "quarterly basis" by  
3 striking the word "as"; and by inserting the words "unless  
4 otherwise" following the words "quarterly basis".

5 And,

6 On page thirteen, by creating a new section, designated  
7 section "45.2.10. Variances.

8 10.1. In the event of an unavoidable shortage of fuel  
9 having characteristics or specifications necessary for a  
10 fuel burning unit to comply with the opacity standards set  
11 forth in section 3 or any emergency situation or condition  
12 creating a threat to public safety or welfare, the Director  
13 may grant an exception to the otherwise applicable visible  
14 emission standards for a period not to exceed fifteen (15)  
15 days, provided that visible emissions during the exception  
16 period do not exceed a maximum six (6) minute average of  
17 thirty (30) percent and that a reasonable demonstration is  
18 made by the owner or operator that the emission standards  
19 under section 4 of this rule will not be exceeded during  
20 the exemption period."

21 10.2. In the event a fuel burning unit employing a  
22 flue gas desulphurization system must by-pass such system  
23 because of necessary planned or unplanned maintenance,  
24 visible emissions may not exceed twenty percent (20%)

1 opacity during such period of maintenance. The Director  
2 may require advance notice of necessary planned  
3 maintenance, including a description of the necessity of  
4 the maintenance activity and its expected duration and may  
5 limit the duration of the variance or the amount of the  
6 excess opacity exception herein allowed. The Director  
7 shall be notified of unplanned maintenance and may limit  
8 the duration of the variance or the amount of excess  
9 opacity exception allowed during unplanned maintenance.

10 And, by renumbering subsequent sections.

11 (t) The legislative rules filed in the state register  
12 on the nineteenth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article three, chapter twenty-two, of this code,  
15 relating to the division of environmental protection  
16 (surface mining and reclamation regulations, 38 CSR 2), are  
17 authorized "with the amendments set forth below"

18 On pages 2 and 3, by striking out subsections 1.6, 1.7  
19 and 1.8 in their entirety;

20 On page 6, by inserting a new subsection 2.20, to read  
21 as follows, and renumbering subsequent subsections;

22 "Chemical Treatment means - the treatment of water  
23 from a surface coal mining operation using chemical  
24 reagents such as but not limited to sodium hydroxide,

1 calcium carbonate, or anhydrous ammonia for purposes of  
2 meeting applicable state and federal effluent limitations.  
3 Chemical treatment does not include passive treatment  
4 systems such as but not limited to limestone drains,  
5 wetlands, alkaline addition, application of flyash,  
6 agricultural lime, or injection of flyash, limestone, or  
7 other minerals into underground coal operations."

8       On page 16, section 2, by striking out subsection 2.92  
9 and renumbering the subsequent subsections.

10       On page 25, by striking the second paragraph of  
11 subsection 3.1 (o) and inserting in lieu thereof a new  
12 second paragraph 3.1 of subsection 3.1 (o), to read as  
13 follows: "Any permit application which references an  
14 approved centralized ownership and control file may be  
15 determined to be complete and accurate for the purposes of  
16 this subsection. Each centralized ownership and control  
17 file shall at a minimum:"

18       On page 63, by striking out subsection 3.25 (e).

19       On page 63, by striking out the first sentence in  
20 subsection 3.26, and inserting in lieu thereof the  
21 following:

22       "(a) All changes including name changes, replacements,  
23 and additions to the ownership or control data relative to  
24 a permittee or assignee who will function as an operator

1 pursuant to the provisions of paragraph (c) of subsection  
2 3.25 of this rule shall be reported to the Director."

3 On page 64, after subsection 3.26 (a) (5) by inserting  
4 a new subsection 3.26 (a) (6) to read as follows:

5 "(6) In the event that a permittee or operator has  
6 incurred no changes in its ownership and control  
7 information and therefore has not been obligated to file  
8 a report within any consecutive twelve-month period, that  
9 permittee or operator is required to notify the Director in  
10 writing that no changes to the information required by  
11 paragraphs (b), (c), (d) and (i) of subsection 3.1 of this  
12 rule have occurred."

13 On page 64, by striking out subsection 3.27 (a) and  
14 inserting in lieu thereof the following:

15 "(a) All active surface mining operations shall be  
16 subject to the renewal requirements and provisions for  
17 issuance of a renewal discussed in Section 19 of the Act:  
18 Provided, That the Director may waive the requirement for  
19 renewal if the permittee certifies in writing that all coal  
20 extraction is completed, that all backfilling and regrading  
21 will be completed within sixty (60) days prior to the  
22 expiration date of the permit, and that an application for  
23 Phase I bond release will be filed prior to the expiration  
24 date of the permit. Failure of the permittee complete



1 backfilling and regrading within sixty (60) days prior to  
2 the expiration date of the permit will nullify the waiver.

3 Those operations which have been granted inactive  
4 status in accordance with subsection 14.11 of this rule  
5 shall also be subject to the renewal requirements of  
6 Section 19 of the Act.

7 Applications for renewal shall be filed on forms  
8 provided by the Director and shall contain at a minimum the  
9 following information:"

10 On page 79, by striking out subsection 3.32 (i) and  
11 renumbering the remaining subsections.

12 On page 80, subsection 3.34 (b) after the word  
13 "criteria" by inserting the words "paragraph (b) of  
14 subsection 3.32 of this section";

15 On page 80, by striking out subsection 3.34 (b) (3)  
16 and substituting therefor a new subsection 3.34 (b) (3), to  
17 read as follows: "(3) The permittee was linked to a  
18 violation, penalty or fee through ownership or control,  
19 under the violation review criteria, paragraph (b) of  
20 subsection 3.32 of this section at the time the permit was  
21 issued and an ownership or control link between the  
22 permittee and the person responsible for the violation,  
23 penalty or fee still exists, or when the link was severed  
24 the permittee continues to be responsible for the

1 violation, penalty or fee."

2 On page 82, by striking out subsection 3.34 (g) and  
3 substituting therefor a new subparagraph (g) to read as  
4 follows:

5 "(g) For purposes of this subsection, a permit is  
6 issued when it is originally approved, as well as when a  
7 transfer, assignment, or sale of permit rights is approved  
8 pursuant to paragraphs (a) or (c), subsection 3.25 of this  
9 rule, or where a permit is revised pursuant to subsection  
10 3.26 of this rule."

11 On page 86, at the end of subsection 4.4, by adding  
12 the following sentence: "Prospecting roads are to be  
13 designed, constructed, maintained, and reclaimed in  
14 accordance with the provisions of subsection 13.6 of this  
15 rule."

16 On page 88, by inserting a new subsection 4.7 (a) (1)  
17 to read as follows: (1) Minimize downstream sedimentation  
18 and flooding and renumbering the remaining subsections.

19 On page 92, subsection 4.12, by inserting a new  
20 sentence between the second and third sentence which reads  
21 as follows: "Where the certification statement indicates a  
22 change from the design standards or construction  
23 requirements approved in the permit, such changes will be  
24 documented in as-built plans and submitted for approval to

1 the Director as a permit revision."

2 On Page 146, section 11.6 (a) in the underscored  
3 language, after the word, "completed" by inserting the  
4 words "or nearly completed".

5 On Page 223, by striking out subsection 14.14 (g) (8)  
6 and inserting in lieu thereof a new subsection 14.14 (g)  
7 (8), to read as follows: "(8) Surface water runoff from  
8 areas above and adjacent to the fill shall be diverted into  
9 properly designed and constructed stabilized diversion  
10 channels which have been designed using best current  
11 technology to safely pass the peak runoff from a 100 year,  
12 24-hour precipitation event. The channel shall be designed  
13 and constructed to ensure stability of the fill, control  
14 erosion, and minimize water infiltration into the fill."

15 On Page 232, by inserting a new subsection, designated  
16 subsection 14.19 (d) to read as follows: "(d) Timber from  
17 clearing and grubbing operations may be wind-rowed below  
18 the projected toe of the outslope in a manner that will  
19 provide shelter and habitat for game and non-game wildlife  
20 and provide for enhanced sediment control. These materials  
21 may not be placed in natural water courses or where they  
22 will be covered by spoil material at the toe of the  
23 outslope. The wind-rows must be of relatively uniform  
24 height and width and must be more or less evenly

1 distributed along the lower reaches and within the permit  
2 area."

3       On Page 240, subsection 17.1, in the first sentence,  
4 after the words "mining and reclamation," by striking out  
5 the remainder of the paragraph and substituting therefor  
6 the following: "required by the Act and these Rules,  
7 including the engineering analyses and designs; the  
8 development of cross-section maps and plans; the geologic  
9 drilling and statement of results of test borings and core  
10 samplings; preblast surveys; the collection of  
11 site-specific resource information and production of  
12 protection and enhancement plans for fish and wildlife  
13 habitats and other environmental values; and the collection  
14 of archaeological and historical information; and any other  
15 archaeological and historical information required by the  
16 federal department of the interior and the preparation of  
17 plans that may be necessitated thereby; and the director  
18 shall provide or assume the cost of training coal operators  
19 that meet the qualifications concerning the preparation of  
20 permit applications and compliance with the regulatory  
21 program, and shall ensure that qualified coal operators are  
22 aware of the assistance available under this section.

23       On Page 240, subsection 17.1, after the first  
24 paragraph by inserting a new paragraph, to read as follows:

1 "The Director will develop a procedure for the interstate  
2 coordination and exchange of information collected under  
3 the Small Operators Assistance Program."

4       On Page 241, by striking out subsection 17.4 in its  
5 entirety and substituting therefor the following: "17.4  
6 Request for Assistance. Each applicant requesting  
7 assistance shall provide information on forms provided by  
8 the director in an application that shall be clear and  
9 concise and shall be provided in a format prescribed by the  
10 Director and/or a format required by the Federal Office of  
11 Surface Mining Reclamation and Enforcement."

12       On Page 249, subsection 17.7 (a) (4), after the words  
13 "twelve (12) month period" by striking the remainder of the  
14 sentence and inserting in lieu thereof the words  
15 "immediately following permit issuance."

16       On page 273, subsection 20.6 (a), after the word  
17 "first" by striking out the words "thirty (30)" and  
18 inserting in lieu thereof the word "fifteen".

19       On page 273, subsection 20.6 (c), after the words  
20 "date of the" by striking out the words "Assessment Officer  
21 receiving the  
22 finding specified in paragraph (a) of this subsection." and  
23 inserting in lieu thereof the words "issuance of a notice  
24 or order";

1 or order";

2 On page 274, subsection 20.6 (d), by striking out the  
3 first sentence, and inserting in lieu thereof the  
4 following: "The time and place of an informal assessment  
5 conference shall be posted at the Department of  
6 Environmental Protection Office nearest to the operation.

7 (u) The legislative rules filed in the state register  
8 on the thirty-first day of July, one thousand nine hundred  
9 ninety-five, authorized under the authority of section  
10 five, article fifteen, chapter twenty-two, of this code,  
11 modified by the division of environmental protection to  
12 meet the objections of the legislative rule-making review  
13 committee and refiled in the state register on the twenty-  
14 fourth day of January, one thousand nine hundred  
15 ninety-six, relating to the division of environmental  
16 protection (solid waste management, 47 CSR 38), are  
17 authorized.

18

19 NOTE: The purpose of this bill is to authorize the  
20 Division of Environmental Protection to promulgate  
21 legislative rules relating to solid waste management.

22

23 Strike-throughs indicate language that would be  
24 stricken from the present law, and underscoring indicates  
25 new language that would be added.

2.

8

8

1           SENATE BILL NO. 179

2           (By Senators Ross, Anderson, Boley,  
3           Buckalew, Grubb and Macnaughtan)

4           [Introduced January 29, 1996; referred  
5           to the Committee on

6           NATURAL RESOURCES  
7           THE JUDICIARY  
8  
9

47-38

10 A BILL to amend and reenact section one, article three,  
11 chapter sixty-four of the code of West Virginia, one  
12 thousand nine hundred thirty-one, as amended, relating  
13 to authorizing the division of environmental  
14 protection to promulgate legislative rules relating to  
15 solid waste management.

16 Be it enacted by the Legislature of West Virginia:

17 That section one, article three, chapter sixty-four of  
18 the code of West Virginia, one thousand nine hundred  
19 thirty-one, as amended, be amended and reenacted, to read  
20 as follows:

21 ARTICLE 3. AUTHORIZATION FOR BUREAU OF ENVIRONMENT TO  
22 PROMULGATE LEGISLATIVE RULES.

23 §64-3-1. Division of environmental protection.

24 (a) The legislative rules filed in the state register



1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 four, article five, chapter twenty-two, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (requirements for determining conformity of  
10 general federal actions to applicable air quality  
11 implementation plans (general conformity), 45 CSR 35), are  
12 authorized.

13 (b) The legislative rules filed in the state register  
14 on the twelfth day of August, one thousand nine hundred  
15 ninety-four, authorized under the authority of section  
16 four, article five, chapter twenty-two, of this code,  
17 modified by the division of environmental protection to  
18 meet the objections of the legislative rule-making review  
19 committee and refiled in the state register on the  
20 twenty-third day of November, one thousand nine hundred  
21 ninety-four, relating to the division of environmental  
22 protection (emission standards for hazardous air pollutants  
23 pursuant to 40 CFR Part 63, 45 CSR 34), are authorized.

24 (c) The legislative rules filed in the state register

1 on the twelfth day of August, one thousand nine hundred  
2 ninety-four, authorized under the authority of section  
3 five, article twenty, chapter sixteen, of this code,  
4 modified by the division of environmental protection to  
5 meet the objections of the legislative rule-making review  
6 committee and refiled in the state register on the  
7 twenty-third day of November, one thousand nine hundred  
8 ninety-four, relating to the division of environmental  
9 protection (standards of performance for new stationary  
10 sources, 45 CSR 16), are authorized with the amendment set  
11 forth below:

12 "On page two, section 4, subsection 4.1, subdivision  
13 4.1.i, by striking out 'Part 60.195(b)' and inserting in  
14 lieu thereof 'Part 60.194(d)';

15 On page two, section 4, subsection 4.1., subdivision  
16 4.1.k, by striking out 'Part 60.335(a)(1)(i)' and inserting  
17 in lieu thereof 'Part 60.335(f)(1)';

18 And,

19 On page two, section 4, after subdivision 'k', by  
20 inserting a new subdivision to read as follows:

21 '1. Part 60.335(f)(1).'"

22 (d) The legislative rules filed in the state register  
23 on the fifteenth day of August, one thousand nine hundred  
24 ninety-four, authorized under the authority of section

1 four, article five, chapter twenty-two, of this code,  
2 modified by the division of environmental protection to  
3 meet the objections of the legislative rule-making review  
4 committee and refiled in the state register on the  
5 nineteenth day of December, one thousand nine hundred  
6 ninety-four, relating to the division of environmental  
7 protection (permits for construction and major modification  
8 of major stationary sources of air pollution for the  
9 prevention of significant deterioration, 45 CSR 14), are  
10 authorized.

11 (e) The legislative rules filed in the state register  
12 on the twelfth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article five, chapter twenty-two, of this code,  
15 modified by the division of environmental protection to  
16 meet the objections of the legislative rule-making review  
17 committee and refiled in the state register on the  
18 twenty-third day of November, one thousand nine hundred  
19 ninety-four, relating to the division of environmental  
20 protection (requirements for determining conformity of  
21 transportation plans, programs and projects developed,  
22 funded or approved under title 23 U.S.C. or the federal  
23 transit act, to applicable air quality implementation  
24 plans, 45 CSR 36), are authorized.

1       (f) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the twenty-  
8 ninth day of December, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (to prevent and control air pollution from the  
11 operation of coal preparation plants and coal handling  
12 operations, 45 CSR 5), are authorized.

13       (g) The legislative rules filed in the state register  
14 on the thirteenth day of September, one thousand nine  
15 hundred ninety-four, authorized under the authority of  
16 section four, article five, chapter twenty-two, of this  
17 code, modified by the division of environmental protection  
18 to meet the objections of the legislative rule-making  
19 review committee and refiled in the state register on the  
20 twelfth day of January, one thousand nine hundred  
21 ninety-five, relating to the division of environmental  
22 protection (to prevent and control air pollution from  
23 hazardous waste treatment, storage or disposal facilities,  
24 45 CSR 25), are authorized.

1       (h) The legislative rules filed in the state register  
2 on the twelfth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 four, article five, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the  
8 twenty-third day of November, one thousand nine hundred  
9 ninety-four, relating to the division of environmental  
10 protection (acid rain provisions and permits, 45 CSR 33),  
11 are authorized.

12       (i) The legislative rules filed in the state register  
13 on the twelfth day of August, one thousand nine hundred  
14 ninety-four, authorized under the authority of section two,  
15 article one, chapter twenty-two, of this code, modified by  
16 the division of environmental protection to meet the  
17 objections of the legislative rule-making review committee  
18 and refiled in the state register on the twenty-third day  
19 of November, one thousand nine hundred ninety-four,  
20 relating to the division of environmental protection  
21 (emission standards for hazardous air pollutants pursuant  
22 to 40 CFR Part 61, 45 CSR 15), are authorized.

23       (j) The legislative rules filed in the state register  
24 on the twelfth day of August, one thousand nine hundred

1 ninety-four, authorized under the authority of section  
2 four, article five, chapter twenty-two, of this code,  
3 modified by the division of environmental protection to  
4 meet the objections of the legislative rule-making review  
5 committee and refiled in the state register on the  
6 twenty-third day of November, one thousand nine hundred  
7 ninety-four, relating to the division of environmental  
8 protection (provisions for determination of compliance with  
9 air quality management rules, 45 CSR 38), are authorized.

10 (k) The legislative rules filed in the state register  
11 on the twelfth day of August, one thousand nine hundred  
12 ninety-four, authorized under the authority of section  
13 five, article twenty, chapter sixteen, of this code,  
14 modified by the division of environmental protection to  
15 meet the objections of the legislative rule-making review  
16 committee and refiled in the state register on the  
17 twenty-third day of November, one thousand nine hundred  
18 ninety-four, relating to the division of environmental  
19 protection (to prevent and control air pollution from  
20 combustion of refuse, 45 CSR 6), are authorized.

21 (l) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section  
24 four, article fourteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the fourth  
4 day of January, one thousand nine hundred ninety-five,  
5 relating to the division of environmental protection (dam  
6 safety, 47 CSR 34), are authorized with the amendments set  
7 forth below:

8       On page 9, section §47-34-3, by striking out  
9 3.5.2.c.A, and substituting therefor the following:

10       "3.5.2.c.A. An impoundment exceeding forty (40) feet  
11 in height or four hundred (400) acre-feet storage volume  
12 shall not be classified as a Class 3 dam."

13       On pages 17 and 18, section §47-34-7, at the end of  
14 section 7.1.1.b.C. by adding the following:

15       "The design precipitation for a Class 3 dam may be  
16 reduced based on Risk Assessment pursuant to paragraph  
17 3.5.4 of this rule, but in no case to less than a P100  
18 rainfall of six (6) hours in duration."

19       On page 40, section §47-34-13, by striking out section  
20 13.2 and substituting therefor the following:

21       "Performance Requirements - All dams completed before  
22 July 1, 1973, shall meet the applicable design requirements  
23 of Section 7 of this rule. Those dams which do not meet  
24 the applicable design requirement of Section 7 of this rule

1 shall be modified, breached, removed, or properly abandoned  
2 pursuant to the provisions of this rule. In developing the  
3 required plans, specifications, and documentation necessary  
4 to bring the structure into conformity with section 7 of  
5 this rule, the design engineer may consider in his  
6 submitted analyses, peculiarities and local conditions for  
7 each impounding structure with recognition of the many  
8 factors involved, some of which may not be precisely known.  
9 Existing construction documentation and the historical  
10 performance of the structure including documented storms  
11 and spillway flows may be considered by the engineer as  
12 part of the evaluation of the structure. Upon approval by  
13 the Director of the plans, specifications, and  
14 documentation submitted by the engineer, the Director may  
15 issue a certificate of approval."

16 (m) The legislative rules filed in the state register  
17 on the fifteenth day of August, one thousand nine hundred  
18 ninety-four, authorized under the authority of section  
19 fifteen, article one, chapter twenty-two, of this code,  
20 modified by the division of environmental protection to  
21 meet the objections of the legislative rule-making review  
22 committee and refiled in the state register on the eleventh  
23 day of January, one thousand nine hundred ninety-five,  
24 relating to the division of environmental protection



1 (regulations governing environmental laboratories  
2 certification and standards of performance, 47 CSR 32), are  
3 authorized.

4 (n) The legislative rules filed in the state register  
5 on the twenty-eighth day of February, one thousand nine  
6 hundred ninety-four, authorized under the authority of  
7 section three, article two, chapter twenty-two-c, of this  
8 code, modified by the division of environmental protection  
9 to meet the objections of the legislative rule-making  
10 review committee and refiled in the state register on the  
11 twenty-eighth day of July, one thousand nine hundred  
12 ninety-four, relating to the division of environmental  
13 protection (state water pollution control revolving fund  
14 program, 47 CSR 31), are authorized.

15 (o) The legislative rules filed in the state register  
16 on the fifteenth day of August, one thousand nine hundred  
17 ninety-four, authorized under the authority of section six,  
18 article seventeen, chapter twenty-two, of this code,  
19 relating to the division of environmental protection  
20 (underground storage tanks, 47 CSR 36), are authorized.

21 (p) The legislative rules filed in the state register  
22 on the fifteenth day of August, one thousand nine hundred  
23 ninety-four, authorized under the authority of section six,  
24 article eighteen, chapter twenty-two, of this code,

1 modified by the division of environmental protection to  
2 meet the objections of the legislative rule-making review  
3 committee and refiled in the state register on the  
4 thirteenth day of January, one thousand nine hundred  
5 ninety-five, relating to the division of environmental  
6 protection (hazardous waste management regulations, 47 CSR  
7 35), are authorized.

8 (q) The legislative rules filed in the state register  
9 on the twenty-second day of July, one thousand nine hundred  
10 ninety-four, authorized under the authority of section  
11 four, article three, chapter twenty-two, of this code,  
12 modified by the division of environmental protection to  
13 meet the objections of the legislative rule-making review  
14 committee and refiled in the state register on the  
15 twenty-ninth day of August, one thousand nine hundred  
16 ninety-four, relating to the division of environmental  
17 protection (standards for certification of blasters-surface  
18 coal mines, 38 CSR 2C), are authorized with the amendments  
19 set forth below:

20 On page 4, section 38.2C.4, after the words "Form  
21 MR-30-TR." by inserting a second paragraph to read as  
22 follows:

23 "In lieu of completing the training program, the  
24 applicant for certification or re-certification may

1 complete a self-study course using the study guide and  
2 other materials available from the Division of  
3 Environmental Protection."

4 On page 8, subsection 8.2, after the words "refresher  
5 training course" by inserting the phrase "or complete the  
6 self-study course."

7 On page 8 at subsection 10.1 by striking out the  
8 phrase "a cessation order and/or take other action as  
9 provided in West Virginia Code 22-3-16 and 17" and the  
10 phrase "the provisions of West Virginia Code 22-3-1 et  
11 seq., rules promulgated under that article, or".

12 On page 9, subsection 11.1, by striking out the  
13 subsection and inserting in lieu thereof a new subsection  
14 to read as follows: "11.1. **Suspension** - Upon service of a  
15 written notice of violation by the Director to a certified  
16 blaster, the Director may suspend his or her certification.  
17 Prior to the issuance of such an order, the certified  
18 blaster shall be granted a hearing before the Director to  
19 show cause why his or her certification should not be  
20 suspended."

21 On page 9, subsection 11.2, by striking out the phrase  
22 "or cessation order" in the first sentence.

23 On page 9, Section 12, by striking out the phrase  
24 "cessation order".

1       (r) The legislative rules filed in the state register  
2 on the fifteenth day of August, one thousand nine hundred  
3 ninety-four, authorized under the authority of section  
4 nine, article three, chapter twenty-two, of this code,  
5 modified by the division of environmental protection to  
6 meet the objections of the legislative rule-making review  
7 committee and refiled in the state register on the sixth  
8 day of January, one thousand nine hundred ninety-five,  
9 relating to the division of environmental protection (rules  
10 and regulations relating to abandoned mine lands and  
11 reclamation, 38 CSR 2D), are authorized.

12       (s) The Legislature hereby authorizes and directs the  
13 division of environmental protection to promulgate the  
14 legislative rules filed in the state register on February,  
15 seventh, one thousand nine hundred ninety-five, authorized  
16 under the authority of section five, article twenty,  
17 chapter sixteen, of this code, relating to the prevention  
18 and control of particulate air pollution from combustion of  
19 fuel in indirect heat exchangers, 45 CSR 2, effective the  
20 \* day of \*, one thousand nine hundred ninety-five, with the  
21 amendments set forth below:  
22 On page eight, section 3.4(e) after the word "operated" by  
23 adding the words "at normal operating loads";  
24 And,

1 On page thirteen, section 9.4 by striking the words  
2 "monthly or", and, following the words "quarterly basis" by  
3 striking the word "as"; and by inserting the words "unless  
4 otherwise" following the words "quarterly basis".

5 And,

6 On page thirteen, by creating a new section, designated  
7 section "45.2.10. Variances.

8 10.1. In the event of an unavoidable shortage of fuel  
9 having characteristics or specifications necessary for a  
10 fuel burning unit to comply with the opacity standards set  
11 forth in section 3 or any emergency situation or condition  
12 creating a threat to public safety or welfare, the Director  
13 may grant an exception to the otherwise applicable visible  
14 emission standards for a period not to exceed fifteen (15)  
15 days, provided that visible emissions during the exception  
16 period do not exceed a maximum six (6) minute average of  
17 thirty (30) percent and that a reasonable demonstration is  
18 made by the owner or operator that the emission standards  
19 under section 4 of this rule will not be exceeded during  
20 the exemption period."

21 10.2. In the event a fuel burning unit employing a  
22 flue gas desulphurization system must by-pass such system  
23 because of necessary planned or unplanned maintenance,  
24 visible emissions may not exceed twenty percent (20%)

1 opacity during such period of maintenance. The Director  
2 may require advance notice of necessary planned  
3 maintenance, including a description of the necessity of  
4 the maintenance activity and its expected duration and may  
5 limit the duration of the variance or the amount of the  
6 excess opacity exception herein allowed. The Director  
7 shall be notified of unplanned maintenance and may limit  
8 the duration of the variance or the amount of excess  
9 opacity exception allowed during unplanned maintenance.

10 And, by renumbering subsequent sections.

11 (t) The legislative rules filed in the state register  
12 on the nineteenth day of August, one thousand nine hundred  
13 ninety-four, authorized under the authority of section  
14 four, article three, chapter twenty-two, of this code,  
15 relating to the division of environmental protection  
16 (surface mining and reclamation regulations, 38 CSR 2), are  
17 authorized "with the amendments set forth below"

18 On pages 2 and 3, by striking out subsections 1.6, 1.7  
19 and 1.8 in their entirety;

20 On page 6, by inserting a new subsection 2.20, to read  
21 as follows, and renumbering subsequent subsections;

22 "Chemical Treatment means - the treatment of water  
23 from a surface coal mining operation using chemical  
24 reagents such as but not limited to sodium hydroxide,

1 calcium carbonate, or anhydrous ammonia for purposes of  
2 meeting applicable state and federal effluent limitations.  
3 Chemical treatment does not include passive treatment  
4 systems such as but not limited to limestone drains,  
5 wetlands, alkaline addition, application of flyash,  
6 agricultural lime, or injection of flyash, limestone, or  
7 other minerals into underground coal operations."

8       On page 16, section 2, by striking out subsection 2.92  
9 and renumbering the subsequent subsections.

10       On page 25, by striking the second paragraph of  
11 subsection 3.1 (o) and inserting in lieu thereof a new  
12 second paragraph 3.1 of subsection 3.1 (o), to read as  
13 follows: "Any permit application which references an  
14 approved centralized ownership and control file may be  
15 determined to be complete and accurate for the purposes of  
16 this subsection. Each centralized ownership and control  
17 file shall at a minimum:"

18       On page 63, by striking out subsection 3.25 (e).

19       On page 63, by striking out the first sentence in  
20 subsection 3.26, and inserting in lieu thereof the  
21 following:

22       "(a) All changes including name changes, replacements,  
23 and additions to the ownership or control data relative to  
24 a permittee or assignee who will function as an operator

1 pursuant to the provisions of paragraph (c) of subsection  
2 3.25 of this rule shall be reported to the Director."

3 On page 64, after subsection 3.26 (a) (5) by inserting  
4 a new subsection 3.26 (a) (6) to read as follows:

5 "(6) In the event that a permittee or operator has  
6 incurred no changes in its ownership and control  
7 information and therefore has not been obligated to file  
8 a report within any consecutive twelve-month period, that  
9 permittee or operator is required to notify the Director in  
10 writing that no changes to the information required by  
11 paragraphs (b), (c), (d) and (i) of subsection 3.1 of this  
12 rule have occurred."

13 On page 64, by striking out subsection 3.27 (a) and  
14 inserting in lieu thereof the following:

15 "(a) All active surface mining operations shall be  
16 subject to the renewal requirements and provisions for  
17 issuance of a renewal discussed in Section 19 of the Act:  
18 *Provided*, That the Director may waive the requirement for  
19 renewal if the permittee certifies in writing that all coal  
20 extraction is completed, that all backfilling and regrading  
21 will be completed within sixty (60) days prior to the  
22 expiration date of the permit, and that an application for  
23 Phase I bond release will be filed prior to the expiration  
24 date of the permit. Failure of the permittee complete



1 backfilling and regrading within sixty (60) days prior to  
2 the expiration date of the permit will nullify the waiver.

3 Those operations which have been granted inactive  
4 status in accordance with subsection 14.11 of this rule  
5 shall also be subject to the renewal requirements of  
6 Section 19 of the Act.

7 Applications for renewal shall be filed on forms  
8 provided by the Director and shall contain at a minimum the  
9 following information:"

10 On page 79, by striking out subsection 3.32 (i) and  
11 renumbering the remaining subsections.

12 On page 80, subsection 3.34 (b) after the word  
13 "criteria" by inserting the words "paragraph (b) of  
14 subsection 3.32 of this section";

15 On page 80, by striking out subsection 3.34 (b) (3)  
16 and substituting therefor a new subsection 3.34 (b) (3), to  
17 read as follows: "(3) The permittee was linked to a  
18 violation, penalty or fee through ownership or control,  
19 under the violation review criteria, paragraph (b) of  
20 subsection 3.32 of this section at the time the permit was  
21 issued and an ownership or control link between the  
22 permittee and the person responsible for the violation,  
23 penalty or fee still exists, or when the link was severed  
24 the permittee continues to be responsible for the

1 violation, penalty or fee."

2       On page 82, by striking out subsection 3.34 (g) and  
3 substituting therefor a new subparagraph (g) to read as  
4 follows:

5       "(g) For purposes of this subsection, a permit is  
6 issued when it is originally approved, as well as when a  
7 transfer, assignment, or sale of permit rights is approved  
8 pursuant to paragraphs (a) or (c), subsection 3.25 of this  
9 rule, or where a permit is revised pursuant to subsection  
10 3.26 of this rule."

11       On page 86, at the end of subsection 4.4, by adding  
12 the following sentence: "Prospecting roads are to be  
13 designed, constructed, maintained, and reclaimed in  
14 accordance with the provisions of subsection 13.6 of this  
15 rule."

16       On page 88, by inserting a new subsection 4.7 (a) (1)  
17 to read as follows: (1) Minimize downstream sedimentation  
18 and flooding and renumbering the remaining subsections.

19       On page 92, subsection 4.12, by inserting a new  
20 sentence between the second and third sentence which reads  
21 as follows: "Where the certification statement indicates a  
22 change from the design standards or construction  
23 requirements approved in the permit, such changes will be  
24 documented in as-built plans and submitted for approval to

1 the Director as a permit revision."

2 On Page 148, section 11.6 (a) in the underscored  
3 language, after the word, "completed" by inserting the  
4 words "or nearly completed".

5 On Page 223, by striking out subsection 14.14 (g) (8)  
6 and inserting in lieu thereof a new subsection 14.14 (g)  
7 (8), to read as follows: "(8) Surface water runoff from  
8 areas above and adjacent to the fill shall be diverted into  
9 properly designed and constructed stabilized diversion  
10 channels which have been designed using best current  
11 technology to safely pass the peak runoff from a 100 year,  
12 24-hour precipitation event. The channel shall be designed  
13 and constructed to ensure stability of the fill, control  
14 erosion, and minimize water infiltration into the fill."

15 On Page 232, by inserting a new subsection, designated  
16 subsection 14.19 (d) to read as follows: "(d) Timber from  
17 clearing and grubbing operations may be wind-rowed below  
18 the projected toe of the outslope in a manner that will  
19 provide shelter and habitat for game and non-game wildlife  
20 and provide for enhanced sediment control. These materials  
21 may not be placed in natural water courses or where they  
22 will be covered by spoil material at the toe of the  
23 outslope. The wind-rows must be of relatively uniform  
24 height and width and must be more or less evenly

1 distributed along the lower reaches and within the permit  
2 area."

3       On Page 240, subsection 17.1, in the first sentence,  
4 after the words "mining and reclamation," by striking out  
5 the remainder of the paragraph and substituting therefor  
6 the following: "required by the Act and these Rules,  
7 including the engineering analyses and designs; the  
8 development of cross-section maps and plans; the geologic  
9 drilling and statement of results of test borings and core  
10 samplings; preblast surveys; the collection of  
11 site-specific resource information and production of  
12 protection and enhancement plans for fish and wildlife  
13 habitats and other environmental values; and the collection  
14 of archaeological and historical information; and any other  
15 archaeological and historical information required by the  
16 federal department of the interior and the preparation of  
17 plans that may be necessitated thereby; and the director  
18 shall provide or assume the cost of training coal operators  
19 that meet the qualifications concerning the preparation of  
20 permit applications and compliance with the regulatory  
21 program, and shall ensure that qualified coal operators are  
22 aware of the assistance available under this section.

23       On Page 240, subsection 17.1, after the first  
24 paragraph by inserting a new paragraph, to read as follows:

1 "The Director will develop a procedure for the interstate  
2 coordination and exchange of information collected under  
3 the Small Operators Assistance Program."

4       On Page 241, by striking out subsection 17.4 in its  
5 entirety and substituting therefor the following: "17.4  
6 Request for Assistance. Each applicant requesting  
7 assistance shall provide information on forms provided by  
8 the director in an application that shall be clear and  
9 concise and shall be provided in a format prescribed by the  
10 Director and/or a format required by the Federal Office of  
11 Surface Mining Reclamation and Enforcement."

12       On Page 249, subsection 17.7 (a) (4), after the words  
13 "twelve (12) month period" by striking the remainder of the  
14 sentence and inserting in lieu thereof the words  
15 "immediately following permit issuance."

16       On page 273, subsection 20.6 (a), after the word  
17 "first" by striking out the words "thirty (30)" and  
18 inserting in lieu thereof the word "fifteen".

19       On page 273, subsection 20.6 (c), after the words  
20 "date of the" by striking out the words "Assessment Officer  
21 receiving the  
22 finding specified in paragraph (a) of this subsection." and  
23 inserting in lieu thereof the words "issuance of a notice  
24 or order";

1 or order";

2 On page 274, subsection 20.6 (d), by striking out the  
3 first sentence, and inserting in lieu thereof the  
4 following: "The time and place of an informal assessment  
5 conference shall be posted at the Department of  
6 Environmental Protection Office nearest to the operation.

7 (u) The legislative rules filed in the state register  
8 on the thirty-first day of July, one thousand nine hundred  
9 ninety-five, authorized under the authority of section  
10 five, article fifteen, chapter twenty-two, of this code,  
11 modified by the division of environmental protection to  
12 meet the objections of the legislative rule-making review  
13 committee and refiled in the state register on the twenty-  
14 fourth day of January, one thousand nine hundred  
15 ninety-six, relating to the division of environmental  
16 protection (solid waste management, 47 CSR 38), are  
17 authorized.

18

19 NOTE: The purpose of this bill is to authorize the  
20 Division of Environmental Protection to promulgate  
21 legislative rules relating to solid waste management.

22

23 Strike-throughs indicate language that would be  
24 stricken from the present law, and underscoring indicates  
25 new language that would be added.



KEN HECHLER  
Secretary of State

MARY P. RATLIFF  
Deputy Secretary of State

STEPHEN N. REED  
Deputy Secretary of State

CATHERINE FREROTTE  
Executive Assistant

Telephone: (304) 558-6000  
Corporations: (304) 558-8000  
FAX: (304) 558-0900

WILLIAM H. HARRINGTON  
Chief of Staff

JUDY COOPER  
Director, Administrative Law

PENNEY BARKER  
Supervisor, Corporations

## STATE OF WEST VIRGINIA

### SECRETARY OF STATE

Building 1, Suite 157-K  
1900 Kanawha Blvd., East  
Charleston, WV 25305-0770

(Plus all the volunteer  
help we can get)

March 12, 1996

Richard P Cooke  
DEP - Waste Mgmt/Water  
Resources  
1356 Hansford Street  
Charleston, WV 25301

**HB 4224** authorizing, Title 47, Series 38, **Solid Waste Management Regulations** passed the Legislature on **March 9, 1996**. It is now awaiting the Governor's signature.

You have sixty (60) days after the Governor signs **HB 4224** to final file the legislative rule with the Secretary of State's office. To final file your legislative rule, fill in the blanks on the enclosed form #6, the "Final Filing" form and file the form with our office with a promulgation history of the rule. Authorization for your legislative rule is cited in **HB 4224 Section 64-3-1(I)**. The agency may set the effective date of the legislative rule up to ninety (90) days from the date the legislative rule is final filed with the Secretary of State's office. Please have an authorized signature on the bottom line.

**\*\*\*IMPORTANT: IF YOUR AGENCY HAS COMPLETED THE LEGISLATIVE RULE ON A WORD PERFECT OR WORD PERFECT COMPATIBLE COMPUTER SYSTEM THAT USES A 3 1/2" DISK, YOU MUST SUBMIT A CLEAN COPY WITH ALL UNDERLINING AND STRIKE-THROUGHS, HEADERS OR FOOTERS REMOVED, TO OUR OFFICE WHEN FINAL FILING THE RULE. REMEMBER, THE TEXT OF THE COMPUTER FILED RULE MUST BE IDENTICAL - WORD FOR WORD, COMMA FOR COMMA, WITH ALL UNDERLINING, STRIKE-THROUGHS, HEADERS OR FOOTERS REMOVED, AS THE HARD COPY AUTHORIZED BY THE LEGISLATURE. NOTICE: ALL ELECTRONIC FILINGS NOT COMPLYING WITH THIS WILL BE REJECTED AND SENT BACK TO THE AGENCY TO BE RESUBMITTED!**

After the final rule is entered into the data base, the rule will be sent back to the agency for review and proofing. The agency has ten (10) working days to send a confirmation or corrections to the Secretary of States. If the agency fails to return this within ten (10) working days, the rule will be filed in the data base with a disclaimer attached stating that the agency failed to review the rule. Following confirmation, corrections or failure to review, as the case may be, the Secretary of State shall submit to the agency a final version of the rule for their records.

If you have any questions or need any assistance, please do not hesitate to contact our office.

Thank you,  
Administrative Law Division

KEN HECHLER  
Secretary of State

MARY P. RATLIFF  
Deputy Secretary of State

STEPHEN N. REED  
Deputy Secretary of State

CATHERINE FREROTTE  
Executive Assistant

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Corporations: (304) 558-8000  
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Charleston, WV 25305-0770

(Plus all the volunteer  
help we can get)

OFFICE OF WEST VIRGINIA  
SECRETARY OF STATE

JUN 24 10 42 AM '96

FILED

TO: RICHARD P COOK

AGENCY: DEP-WASTE MGMT\WATER RES

FROM: JUDY COOPER, DIRECTOR, ADMINISTRATIVE LAW DIVISION

DATE: June 24, 1996

THE ATTACHED RULE FILED BY YOUR AGENCY HAS BEEN ENTERED INTO OUR COMPUTER SYSTEM. PLEASE REVIEW, PROOF AND RETURN IT WITH ANY CORRECTIONS. IF THERE ARE NO CORRECTIONS, PLEASE SIGN THIS MEMO AND RETURN IT TO THIS OFFICE. YOU WILL BE SENT A FINAL VERSION OF THE RULE FOR YOUR RECORDS.

PLEASE RETURN EITHER THE CORRECTED RULE OR THIS FORM WITHIN TEN (10) WORKING DAYS OF THE DATE YOU RECEIVED THIS REQUEST. CALL IF YOU HAVE ANY QUESTIONS.

SERIES: 38 TITLE: 47 DEP-WASTE MGMT\WATER RES

\* THE ATTACHED RULE HAS BEEN REVIEWED AND IS CORRECT.

SIGNED: Larry D. Attha

TITLE OF PERSON SIGNING: ERS III

DATE: 6/24/96

\*\*\*\*\*

\* THE ATTACHED RULE HAS BEEN REVIEWED AND NEEDS CORRECTING. THE CORRECTIONS HAVE BEEN MARKED.

SIGNED: \_\_\_\_\_

TITLE OF PERSON SIGNING: \_\_\_\_\_

DATE: \_\_\_\_\_

NOTE: IF YOU ARE NOT THE PERSON WHO HANDLES THIS RULE, PLEASE FORWARD TO THE CORRECT PERSON.



# **ATTACHMENT 3**

HB 4224

RECEIVED  
96 APR -2 11:54  
LEGISLATIVE**WEST VIRGINIA LEGISLATURE**

REGULAR SESSION, 1996

— • —

**ENROLLED**COM. SUB. FOR  
**HOUSE BILL No. 4224**(By Delegates DOUGLAS, GALLAGHER, )  
FAIRCLOTH, COMPTON, LINCH AND RIGGS

— • —

Passed MARCH 9, 1996In Effect from Passage

RECEIVED  
95 APR -2 11:11:56  
DIRECTOR OF COURTS  
478 101-101  
**ENROLLED**

COMMITTEE SUBSTITUTE

FOR

**H. B. 4224**

(BY DELEGATES DOUGLAS, GALLAGHER, FAIRCLOTH,  
COMPTON, LINCH AND RIGGS)

[Passed March 9, 1996; in effect from passage.]

AN ACT to amend and reenact section one, article one, and sections one and two, article three, all of chapter sixty-four of the code of West Virginia, one thousand nine hundred thirty-one, as amended, all relating generally to the promulgation of administrative rules by the various executive or administrative agencies and the procedures relating thereto; providing that any rules proposed by an executive or administrative agency, and introduced in a bill of authorization by the Legislature, but not authorized by the Legislature are disapproved; the legislative mandate or authorization for the promulgation of certain legislative rules by various executive and administrative agencies of the state; authorizing certain of the agencies to promulgate certain legislative rules in the form that the rules were filed in the state register; authorizing certain of the agencies to promulgate legislative rules as amended by the Legislature; authorizing certain of the agencies to promulgate legislative rules with various modifications presented to and recommended by the legislative rule-making review committee; authorizing the division of environmental protection to promulgate legislative rules relating to emission standards for hazardous air pollutants, as filed; authorizing the division of environmental protection to promulgate legislative rules relating to prevention and control air pollution from hazardous waste treatment, storage or

Enr. Com. Sub. for H. B. 4224] 2

disposal facilities, as modified; authorizing the division of environmental protection to promulgate legislative rules relating to acid rain provisions and permits, as filed; authorizing the division of environmental protection to promulgate legislative rules relating to underground storage tanks, as modified; authorizing division of environmental protection to promulgate legislative rules relating to hazardous waste management regulations, as modified; authorizing the division of environmental protection to promulgate legislative rules relating to surface mining and reclamation regulations, as modified and amended; authorizing the division of environmental protection to promulgate legislative rules relating to coalbed methane wells, as modified; authorizing the division of environmental protection to promulgate legislative rules relating to waste tire management, as modified; authorizing the division of environmental protection to promulgate legislative rules relating to sewage sludge management, as modified; authorizing the division of environmental protection to promulgate legislative rules relating to prevention and control of air pollution from the emission of volatile organic compounds, as amended; authorizing the division of environmental protection to promulgate legislative rules relating to monitoring well design standards, as modified; authorizing the division of environmental protection to promulgate legislative rules relating to solid waste management, as modified and amended; authorizing the environmental quality board to promulgate legislative rules relating to requirements governing water quality standards as modified and amended; authorizing the solid waste management board to promulgate legislative rules relating to development of comprehensive litter and solid waste control plans, as modified.

*Be it enacted by the Legislature of West Virginia:*

That section one, article one, and sections one and two, article three, all of chapter sixty-four of the code of West Virginia, one thousand nine hundred thirty-one, as amended, be amended and reenacted, all to read as follows:

**ARTICLE 1. GENERAL LEGISLATIVE AUTHORIZATION.**

**§64-1-1. Legislative authorization.**

3 [Enr. Com. Sub. for H. B. 4224

1 Under the provisions of article three, chapter  
2 twenty-nine-a of the code of West Virginia, the Legislature  
3 expressly authorizes the promulgation of the rules de-  
4 scribed in articles two through eleven of this chapter, sub-  
5 ject only to the limitations set forth with respect to each  
6 such rule in the section or sections of this chapter autho-  
7 rizing its promulgation. The Legislature declares that all  
8 rules now or hereafter authorized under articles two  
9 through eleven of this chapter are within the legislative  
10 intent of the statute which the rule is intended to imple-  
11 ment, extend, apply or interpret. Legislative rules promul-  
12 gated pursuant to the provisions of articles one through  
13 eleven of this chapter in effect at the effective date of this  
14 section shall continue in full force and effect until  
15 reauthorized in this chapter by legislative enactment, or  
16 until amended by emergency rule pursuant to the provi-  
17 sions of article three, chapter twenty-nine-a of this code.  
18 All proposed legislative rules for which bills of authoriza-  
19 tion have been introduced in the Legislature not specifi-  
20 cally authorized under articles two through eleven of this  
21 chapter are disapproved by the Legislature.

**ARTICLE 3. AUTHORIZATION FOR BUREAU OF ENVIRON-  
MENT TO PROMULGATE LEGISLATIVE  
RULES.**

**§64-3-1. Division of environmental protection.**

1 (a) The legislative rules filed in the state register on the  
2 twenty-eighth day of July, one thousand nine hundred  
3 ninety-five, authorized under the authority of section four,  
4 article five, chapter twenty-two of this code, relating to the  
5 division of environmental protection (emission standards  
6 for hazardous air pollutants pursuant to 40 CFR Part 63,  
7 45CSR34), are authorized.

8 (b) The legislative rules filed in the state register on  
9 the twenty-eighth day of July, one thousand nine hundred  
10 ninety-five, authorized under the authority of section four,  
11 article five, chapter twenty-two of this code, modified by  
12 the division of environmental protection to meet the ob-  
13 jections of the legislative rule-making review committee  
14 and refiled in the state register on the twenty-seventh day  
15 of October, one thousand nine hundred ninety-five, relat-

Enr. Com. Sub. for H. B. 4224] 4

16 ing to the division of environmental protection (to prevent  
17 and control air pollution from hazardous waste treatment,  
18 storage or disposal facilities, 45CSR25), are authorized.

19 (c) The legislative rules filed in the state register on the  
20 twenty-eighth day of July, one thousand nine hundred  
21 ninety-five, authorized under the authority of section four,  
22 article five, chapter twenty-two of this code, relating to the  
23 division of environmental protection (acid rain provisions  
24 and permits, 45CSR33), are authorized.

25 (d) The legislative rules filed in the state register on  
26 the thirty-first day of July, one thousand nine hundred  
27 ninety-five, authorized under the authority of section six,  
28 article seventeen, chapter twenty-two of this code, modi-  
29 fied by the division of environmental protection to meet  
30 the objections of the legislative rule-making review com-  
31 mittee and refiled in the state register on the eighteenth  
32 day of January, one thousand nine hundred ninety-six,  
33 relating to the division of environmental protection (un-  
34 derground storage tanks, 47CSR36), are authorized.

35 (e) The legislative rules filed in the state register on the  
36 thirty-first day of July, one thousand nine hundred  
37 ninety-five, authorized under the authority of section six,  
38 article eighteen, chapter twenty-two of this code, modified  
39 by the division of environmental protection to meet the  
40 objections of the legislative rule-making review committee  
41 and refiled in the state register on the eighteenth day of  
42 January, one thousand nine hundred ninety-six, relating to  
43 the division of environmental protection (hazardous waste  
44 management regulations, 47CSR35), are authorized.

45 (f) The legislative rules filed in the state register on the  
46 thirty-first day of July, one thousand nine hundred  
47 ninety-five, authorized under the authority of section four,  
48 article three, chapter twenty-two of this code, modified by  
49 the division of environmental protection to meet the ob-  
50 jections of the legislative rule-making review committee  
51 and refiled in the state register on the twenty-third day of  
52 January, one thousand nine hundred ninety-six, relating to  
53 the division of environmental protection (surface mining  
54 and reclamation regulations, 38CSR2), are authorized with  
55 the following amendments:

5 [Enr. Com. Sub. for H. B. 4224

56 On page 64, section 3.27, after the word "Director" by  
57 striking out the word "may" and inserting in lieu thereof  
58 the word "shall";

59 On page 64, section 3.27, after the word "completed"  
60 by striking out the remainder of the first paragraph and  
61 inserting in lieu thereof the following words:

62 "and reclamation activities are ongoing."

63 On page 156, section 11.6(c)(6)(A) after the word  
64 "operations" by striking out the words "within five (5)  
65 years of the date of SMA approval,";

66 On page 156, section 11.6(c)(6)(B) after the word  
67 "(95-87)" by striking out the words "within five (5) years  
68 of the date of SMA approval,";

69 On page 157, section 11.6(c)(6)(C) after the word  
70 "State" by striking out the words "within five (5) years of  
71 the date of SMA approval,";

72 On page 163, section 11.6(d)(6)(A), after the word  
73 "applicant" by striking out the words "within five (5) years  
74 of the date of SMA approval,";

75 On page 164, section 11.6(d)(6)(B), after the word  
76 "95-87" by striking out the words "within five (5) years of  
77 the date of SMA approval,";

78 On page 164, section 11.6(d)(6)(C), after the word  
79 "wetlands" by striking out the words "within five (5) years  
80 of the date of SMA approval,";

81 On page 169, section 11.6(e)(5)(A), after the word  
82 "95-87" by striking out the words "within five (5) years of  
83 the date of SMA approval,";

84 On page 169, section 11.6(e)(5)(B), after the word  
85 "wetlands" by striking out the words "within five (5) years  
86 of the date of SMA approval,";

87 On page 175, section 11.6(f)(5)(A), after the word  
88 "95-87", by striking out the words "within five (5) years of  
89 the date of SMA approval,";

90 On page 175, section 11.6(f)(5)(B), after the word

Enr. Com. Sub. for H. B. 4224] 6

91 "enhancement" by striking out the words "of wetlands  
92 within five (5) years of the date of SMA approval,".

93 And,

94 On page 178, section 12.2 subsection (e) by striking  
95 12.2.e in its entirety and inserting in lieu thereof the fol-  
96 lowing:

97 Notwithstanding any other provisions of this rule, no  
98 bond release or reduction will be granted if, at the time,  
99 water discharged from or affected by the operation re-  
100 quires chemical treatment in order to comply with applica-  
101 ble effluent limitations or water quality standards: *Provid-*  
102 *ed*, That the Director may approve a request for Phase I  
103 but not Phase II or III, release if the applicant demon-  
104 strates to the satisfaction of the Director that either:

105 (A) The remaining bond is adequate to assure long  
106 term treatment of the drainage; or

107 (B) The operator has irrevocably committed other  
108 financial resources which are adequate to assure long term  
109 treatment of the drainage: *Provided*, That the alternate  
110 financial resources must be in acceptable form, and meet  
111 the standards set forth in Section 11 of the Act and Sec-  
112 tion 11 of this rule: *Provided, however*, That the alternate  
113 financial arrangements shall provide a mechanism where-  
114 by the Director can assume management of the resources  
115 and treatment work in the event that the operator defaults  
116 for any reason: *And provided further*, That default on a  
117 treatment obligation under this paragraph shall be consid-  
118 ered equivalent to a bond forfeiture, and the operator will  
119 be subject to penalties and sanctions, including permit  
120 blocking, as if a bond forfeiture had occurred.

121 In order to make such demonstration as referenced  
122 above, the applicant shall address, at a minimum, the cur-  
123 rent and projected quantity and quality of drainage to be  
124 treated, the anticipated duration of treatment, the estimated  
125 capital and operating cost of the treatment facility, and the  
126 calculations which demonstrate the adequacy of the re-  
127 maining bond or of the alternate financial resources.

128 "On page sixteen, section 38-2-2.106, after the words



7 [Enr. Com. Sub. for H. B. 4224

129 'sum of the loading' by inserting the words 'or driving';  
130 and by striking out the words 'in a constructed valley fill,  
131 backfill, dam, or refuse pile' and inserting in lieu thereof  
132 the words 'as determined by acceptable engineering prac-  
133 tices';

134 On page twenty-eight, section 38-2-3.2(e), after the  
135 words 'limited number of minor changes' by inserting the  
136 words 'that do not significantly affect the health, safety or  
137 welfare of the public and';

138 On page thirty-six, section 38-2-3.6(h)(5), after the  
139 words 'as defined in' by striking out the words 'Article 5D  
140 of Chapter 20' and inserting in lieu thereof the words  
141 'Article 14 of Chapter 22';

142 On page thirty-nine, section 38-2-3.8(c), at the end  
143 after the words 'reasonable time for compliance.', by in-  
144 serting a new sentence to read as follows: '*Provided*, That  
145 those structures and facilities, where it can be demonstrat-  
146 ed that reconstruction or revision would result in greater  
147 environmental harm and the performance standards set  
148 forth in the Act and these regulations can otherwise be  
149 met, may be exempt from revision or reconstruction.';

150 On page one hundred seventy-eight, section  
151 38-2-12.2(d), after the words 'until all coal extraction  
152 operations' by inserting the words 'for the permit or incre-  
153 ment thereof', and after the words 'the entire disturbed  
154 area' by inserting the words 'for the permit or increment  
155 thereof';

156 On page one hundred ninety-seven, section  
157 38-2-14.3(c)(2), after the words 'medium is the best' by  
158 inserting the word 'reasonably';

159 And,

160 On page two hundred fifteen, section 38-2-14.14(e)  
161 (4), by striking the sentence 'Runoff from areas above and  
162 adjacent to the fill shall not be allowed to flow onto the fill  
163 surface, and shall be diverted into stabilized diversion  
164 channels, designed and constructed to safely pass the peak  
165 runoff from a 100 year, 24 hour precipitation event.' and  
166 inserting in lieu thereof the sentences 'Surface water run-

Enr. Com. Sub. for H. B. 4224] 8

167 off from areas above and adjacent to the fill shall be di-  
168 verted into properly designed and constructed stabilized  
169 diversion channels which have been designed using best  
170 current technology to safely pass the peak runoff from a  
171 100 year, 24 hour precipitation event. The channel shall  
172 be designed and constructed to ensure stability of the fill,  
173 control erosion, and minimize water infiltration into the  
174 fill.' "

175 (g) The legislative rules filed in the state register on  
176 the twenty-sixth day of July, one thousand nine hundred  
177 ninety-five, authorized under the authority of section four,  
178 article twenty-one, chapter twenty-two of this code, modi-  
179 fied by the division of environmental protection to meet  
180 the objections of the legislative rule-making review com-  
181 mittee and refiled in the state register on the fourteenth  
182 day of December, one thousand nine hundred ninety-five,  
183 relating to the division of environmental protection  
184 (coalbed methane wells, 38CSR23), are authorized.

185 (h) The legislative rules filed in the state register on  
186 the twenty-third day of November, one thousand nine  
187 hundred ninety-four, authorized under the authority of  
188 section eight, article eleven, chapter twenty of this code,  
189 modified by the division of environmental protection to  
190 meet the objections of the legislative rule-making review  
191 committee and refiled in the state register on the twentieth  
192 day of December, one thousand nine hundred ninety-five,  
193 relating to the division of environmental protection (waste  
194 tire management, 47CSR38G), are authorized.

195 (i) The legislative rules filed in the state register on the  
196 twenty-second day of June, one thousand nine hundred  
197 ninety-five, authorized under the authority of section  
198 twenty, article fifteen, chapter twenty-two of this code,  
199 modified by the division of environmental protection to  
200 meet the objections of the legislative rule-making review  
201 committee and refiled in the state register on the  
202 twenty-second day of December, one thousand nine hun-  
203 dred ninety-five, relating to the division of environmental  
204 protection (sewage sludge management, 47CSR38D), are  
205 authorized with the amendments set forth below:

206 On page seven, section 3.2.2, by striking out the words

9 [Enr. Com. Sub. for H. B. 4224

207 "Table 3 of this rule will automatically be repealed and  
208 replaced with Table 3A of this rule on December 31, 1997  
209 unless this provision is modified prior to that date.";

210 And,

211 On page seven, section 3.2.2, after the word "rule." by  
212 inserting the following: The director is authorized until  
213 Dec. 31, 1999 to issue variances to this section to allow  
214 land application to soils which exceed the maximum soil  
215 concentrations of metals listed in Table 3 where soil analy-  
216 ses demonstrate that other soil factors, including but not  
217 limited to, soil pH, cation exchange capacity, organic mat-  
218 ter content, or clay content, will limit mobility and avail-  
219 ability of the metals. No later than June 30, 1999, the  
220 director shall propose revisions to Table 3 to adequately  
221 protect soil quality, human health and the environment',

222 And,

223 On page 20, by striking the following from table 3:  
224 "NOTE: Table 3 of this rule will automatically be re-  
225 pealed and replaced with Table 3A of this rule on Decem-  
226 ber 31, 1997 unless the provision of paragraph 3.2.2 of  
227 this rule is modified prior to that date.",

228 And,

229 On page 21, by striking out all of Table 3A.

230 (j) The legislative rules filed in the state register on the  
231 thirty-first day of July, one thousand nine hundred  
232 ninety-five, authorized under the authority of section four,  
233 article five, chapter twenty-two of this code, relating to the  
234 division of environmental protection (to prevent and con-  
235 trol of air pollution from the emission of volatile organic  
236 compounds, 45CSR21), are authorized with the following  
237 amendment:

238 "On pages 170 and 171, by striking out section 40 in  
239 its entirety and inserting in lieu thereof a new section 40,  
240 to read as follows:

**§45-21-40. Other Facilities that Emit Volatile Organic Com-  
pound (VOC).**

Enr. Com. Sub. for H. B. 4224] 10

1       40.1.Applicability.

2       a. This section 40. applies to any facility that has ag-  
3 gregate maximum theoretical emissions of 90.7 mega-  
4 grams (mg) (100 tons) or more of volatile organic com-  
5 pounds (VOCs) per calendar year in the absence of con-  
6 trol devices; provided that this section 40. applies to any  
7 source or sources within such facility other than those  
8 sources subject to regulation under sections 11. through  
9 39. VOC emissions from sources regulated under sections  
10 11. through 39., but which fall below the applicability  
11 thresholds of these sections, and thus are not subject to the  
12 emissions control standards of these sections, shall be  
13 included in the determination of maximum theoretical  
14 emissions for a facility but shall not be subject to the re-  
15 quirements of this section 40. Emissions from sources  
16 listed in section 40.1.d. shall not be included in the deter-  
17 mination of maximum theoretical emissions for a facility.

18       b. The owner or operator of a coating line or opera-  
19 tion, whose emissions are below this applicability thresh-  
20 hold, shall comply with the certification, recordkeeping,  
21 and reporting requirements of section 40.6.a.

22       c. The owner or operator of a non-coating source,  
23 whose emissions are below this applicability threshold,  
24 shall comply with the certification, recordkeeping, and  
25 reporting requirements of section 40.6.b.

26       d. The requirements of this section 40. shall not apply  
27 to coke ovens (including by-product recovery plants), fuel  
28 combustion sources, barge loading facilities, jet engine test  
29 cells, vegetable oil processing facilities, wastewater treat-  
30 ment facilities, iron and steel production, surface im-  
31 poundments, pits; and boilers, industrial furnaces, and  
32 incinerators having a destruction efficiency of 95 percent  
33 or greater.

34       e. The requirements of this section 40. shall not apply  
35 to any facility bound by an order or permit, enforceable  
36 by the Director, which limits the facility's emissions to less  
37 than 100 tons of VOC per calendar year without the appli-  
38 cation of control devices.

11 [Enr. Com. Sub. for H. B. 4224

39 40.2. Definitions. — As used in this section 40., all  
40 terms not defined herein shall have the meaning given  
41 them in section 2.

42 a. 'Reasonably available control measures' (also denot-  
43 ed as RACM) means an emission limit or limits that reflect  
44 the application of control technology and/or abatement  
45 techniques or measures that are reasonably available, con-  
46 sidering technological and economic feasibility. Such  
47 emission limits may be considered on a plant-wide basis to  
48 achieve emission reduction requirements in the most cost  
49 effective manner.

50 b. "Fugitive emissions" means those emissions which  
51 could not reasonably pass through a stack, chimney, vent,  
52 or other functionally equivalent opening.

53 40.3. Standards. — The owner or operator of a facility  
54 subject to this section 40. shall:

55 a. Except as provided in section 40.3.b.,

56 1. With respect to any existing non-fugitive emission  
57 source which has maximum theoretical emissions of 6  
58 pounds per hour or more, comply with an emission con-  
59 trol plan established on a case-by-case basis approved by  
60 the Director that meets the definition of reasonably avail-  
61 able control measures (RACM) and achieves at least a 90  
62 percent reduction in emissions below the total (aggregate)  
63 maximum theoretical emissions from all such non-fugitive  
64 emission sources subject to RACM requirements; and

65 2. With respect to each process unit producing a prod-  
66 uct or products, intermediate or final, in excess of 1000  
67 megagrams (Mg) (1,100 tons) per year, regardless of  
68 whether such product or products are listed in 40 CFR  
69 60.489, comply with an emission control plan for fugitive  
70 sources using the methods and criteria of section 37., or  
71 alternative methods and criteria approved by the Director.  
72 The Director may exempt a process unit from fugitive  
73 emission control requirements upon satisfactory demon-  
74 stration that emissions are of minor significance.

75 b. With respect to such sources as described in sections  
76 40.3.a.1. and 40.3.a.2., comply with emission limits and

Enr. Com. Sub. for H. B. 4224] 12

77 measures based upon an alternative emissions reduction  
78 plan approved by the Director considering technical, eco-  
79 nomic and air quality benefit considerations that, at a  
80 minimum, maintains emission control measures incorpo-  
81 rated as part of any federally approved maintenance plan  
82 for the county or area in which the source is located.

83 c. With respect to any source at a facility subject to this  
84 section 40., which source has maximum theoretical emis-  
85 sions of 6 pounds per hour or more and is constructed,  
86 modified or begins operating after the effective date of  
87 this rule, comply with a control plan developed on a  
88 case-by-case basis approved by the Director that meets the  
89 definition of reasonably available control technology  
90 (RACT) in section 2.60. for both fugitive and non-fugitive  
91 emission sources.

#### 92 40.4. Submissions and Approval of Control Plans

93 a. Within 90 days after the effective date of this rule,  
94 the owner or operator of a facility subject to this section  
95 40. shall submit any required amendments to the  
96 case-by-case RACT control plans previously submitted to  
97 the Director, that revise such control plans to meet the  
98 definition of reasonably available control measures  
99 (RACM).

100 b. Notwithstanding the provisions of section 9.2., the  
101 owner or operator of a facility subject to this rule solely  
102 due to this section 40., that requires a major process  
103 change and/or major capital investment to comply with  
104 RACM requirements, may petition the Director for an  
105 additional extension beyond December 31, 1996, for  
106 compliance certification, and the Director may grant such  
107 extension when warranted. Provided however, such com-  
108 pliance certification date shall be no later than July 31,  
109 1997.

110 c. The Director shall not approve a RACM plan or an  
111 alternative emissions reduction plan under this section 40.  
112 unless such plan includes:

113 1. A commitment to develop and submit a complete  
114 RACT plan to the Director within 180 days of a finding

13 [Enr. Com. Sub. for H. B. 4224

115 by the Director that a violation of the National Ambient  
116 Air Quality Standard for ozone has occurred within the  
117 county or maintenance area in which the source is located;  
118 and

119 2. A commitment to achieving full implementation of  
120 RACT within 2 years of approval of the RACT plan by the  
121 Director.

122 d. A finding by the Director that a violation of the  
123 National Ambient Air Quality Standard for ozone has  
124 occurred shall be made based upon verification of a moni-  
125 tored ozone standard violation in the county or mainte-  
126 nance area in which the source is located. The three main-  
127 tenance areas (the Huntington area, comprising Cabell and  
128 Wayne counties; the Charleston area, comprising Kanawha  
129 and Putnam counties; and the Parkersburg area, compris-  
130 ing Wood county) shall be treated separately and indepen-  
131 dently for any such finding(s).

132 e. All RACM control plans, RACT control plans, and  
133 alternative emissions reduction plans approved by the  
134 Director pursuant to this section 40. shall be embodied in  
135 a consent order or permit in accordance with 45CSR13 or  
136 45CSR30, as required. A facility owner or operator may  
137 at any time petition the Director to approve revisions to  
138 these plans. The decision concerning said petition shall be  
139 issued by the Director in accordance with 45CSR13 or  
140 45CSR30, as required, or a consent order. Any such revi-  
141 sions shall be subject to the public participation require-  
142 ments of 45CSR13 or 45CSR30.

143 f. The owner or operator of a facility subject to this  
144 section 40. may submit for approval by the Director an  
145 emission control plan that meets the definition of reason-  
146 ably available control technology (RACT) in section 2.60.

147 40.5. Test methods and procedures. — The owner or  
148 operator of any source subject to this section 40. shall  
149 demonstrate compliance with section 40.3. by using the  
150 applicable test methods specified in sections 41. through  
151 46 or by other means approved by the Director. Notwith-  
152 standing the requirements of section 41.1., EPA approval  
153 for alternate test methods to demonstrate compliance shall

Enr. Com. Sub. for H. B. 4224] 14

154 not be required for sources which are subject solely to  
155 emission control requirements specified in section 40.3.

156 40.6. Reporting and Recordkeeping Requirements for  
157 Exempt Non-Control Technique Guideline (CTG) Sourc-  
158 es.

159 a. An owner or operator of a coating line or operation  
160 that is exempt from the emission limitations in section  
161 40.3. shall comply with the certification, recordkeeping,  
162 and reporting requirements in section 4.2.

163 b. An owner or operator of a non-coating source that  
164 is exempt from the emission limitations in section 40.3.  
165 shall submit, upon request by the Director, records that  
166 document that the source is exempt from these require-  
167 ments.

168 1. These records shall be submitted to the Director  
169 within 30 days from the date of request.

170 2. If such records are not made available, the source  
171 will be considered subject to the limits in section 40.3.

172 40.7. Reporting and Recordkeeping Requirements for  
173 Subject Non-CTG Coating Sources. — An owner or oper-  
174 ator of a coating line or operation subject to this section  
175 40. and complying with section 40.3. shall comply with  
176 the certification, recordkeeping, and reporting require-  
177 ments in section 4.

178 40.8. Reporting and Recordkeeping Requirements for  
179 Subject Non-CTG, Non-Coating Sources.

180 a. The owner or operator of the subject VOC sources  
181 shall perform all testing and maintain the results of all tests  
182 and calculations required under sections 40.3. and 40.5.  
183 to demonstrate that the subject source is in compliance.

184 b. The owner or operator of the subject VOC source  
185 shall maintain these records in a readily accessible location  
186 for a minimum of 3 years, and shall make these records  
187 available to the Director upon verbal or written request.

188 c. The owner or operator of any facility containing  
189 sources subject to this section 40. shall comply with the



15 [Enr. Com. Sub. for H. B. 4224

190 requirements in section 5. except that such requirements,  
191 as they apply to sources solely subject to this section 40.,  
192 may be modified by the Director upon petition by the  
193 owner or operator. Any such modified requirements shall  
194 be embodied in the facility's control plan (RACM, RACT  
195 or alternative plan) and reflected in the associated consent  
196 order or permit issued pursuant to 45CSR13 or  
197 45CSR30.' "

198 (k) The legislative rules filed in the state register on  
199 the twenty-seventh day of July, one thousand nine hun-  
200 dred ninety-five, authorized under the authority of section  
201 five, article twelve, chapter twenty-two of this code, modi-  
202 fied by the division of environmental protection to meet  
203 the objections of the legislative rule-making review com-  
204 mittee and refiled in the state register on the seventeenth  
205 day of January, one thousand nine hundred ninety-six,  
206 relating to the division of environmental protection (moni-  
207 toring well design standards, 47CSR60), are authorized.

208 (l) The legislative rules filed in the state register on the  
209 thirty-first day of July, one thousand nine hundred  
210 ninety-five, authorized under the authority of section five,  
211 article fifteen, chapter twenty-two of this code, modified  
212 by the division of environmental protection to meet the  
213 objections of the legislative rule-making review committee  
214 and refiled in the state register on the twenty-fourth day of  
215 January, one thousand nine hundred ninety-six, relating to  
216 the division of environmental protection (solid waste man-  
217 agement, 47CSR38), are authorized with the following  
218 amendments:

219 "On page 37, subdivision 3.8.4, after the words 'from  
220 the uppermost' by striking the word 'significant.'

221 On page 142, by striking the existing subdivision  
222 4.11.2.c.A and inserting in lieu thereof the following:

223 **'4.11.2.c.A**

224 The monitoring frequency for all constituents listed in  
225 Appendix I of this rule, must be at least twice a year dur-  
226 ing the active life of the facility, including closure and the  
227 post-closure periods. The director may require more fre-

Enr. Com. Sub. for H. B. 4224] 16

228 quent monitoring on a site-specific basis by considering  
229 aquifer flow rate and existing quality of the groundwater.'

230 On page 148, by striking the existing subdivision  
231 4.11.3.i.A. and inserting in lieu thereof the following:

232 **'4.11.3.i.A.**

233 The director may consider an alternative groundwater  
234 protection standard in consultation with the environmental  
235 quality board pursuant to 47CSR57 for constituents for  
236 which water quality standards have not been established.'

237 On page 151, subdivision 4.11.5., by following the  
238 words 'any applicable groundwater quality protection  
239 standards' by inserting the words 'and/or background  
240 groundwater quality, pursuant to the requirements of the  
241 Groundwater Protection Act, WVC §22-12-1 et seq.'

242 On page 152, subdivision 4.11.6.b.A., by following  
243 the words 'Be protective of human health and the environ-  
244 ment' inserting the words 'and maintain existing ground-  
245 water quality, pursuant to the requirements of the Ground-  
246 water Protection Act, WVC §22-12-1 et seq.'

247 On page 154, subdivision 4.11.6.d.B.(f), by striking  
248 the words 'Resource value of the aquifer' and inserting in  
249 lieu thereof the words 'The hydrogeologic characteristics  
250 of the facility and the surrounding land,'

251 On page 154, subdivision 4.11.6.d.B(f).(e) by striking  
252 out the words "The hydrogeologic characteristics of the  
253 facility and surrounding land;

254 And, by renumbering and relettering the remaining  
255 subdivisions of the rule.

256 On page 156, subdivision 4.11.7.a.A., by following  
257 the words 'Demonstrate compliance with' inserting the  
258 words 'the Groundwater Protection Act, WVC §22-12-1 et  
259 seq., and/or the"

260 And,

261 On page 173, subdivision 5.4.3, by adding the follow-  
262 ing sentence to the end of the subdivision: 'A class D facil-

17 [Enr. Com. Sub. for H. B. 4224

263 ity other than a class D-1 solid waste facility shall not  
264 exceed two (2) acres in size.' "

**§64-3-2. Environmental boards.**

1 (a) The legislative rules filed by the environmental  
2 quality board in the state register on the thirty-first day of  
3 July, one thousand nine hundred ninety-five, under the  
4 authority of section four, article three, chapter twenty-  
5 two-b of this code, modified by the environmental quality  
6 board to meet the objections of the legislative rule-making  
7 review committee and refiled in the state register on the  
8 nineteenth day of January, one thousand nine hundred  
9 ninety-six, relating to the environmental quality board  
10 (requirements governing water quality standards,  
11 46CSR1), are authorized with the following amendments:

12 "On page one, section two, by deleting all of subsec-  
13 tion 2.1;

14 On page one by renumbering the following subsec-  
15 tion:

16 On page two, after subsection 2.1, by adding a new  
17 subsection 2.2 to read as follows:

18 '2.2. 'Cumulative' means a pollutant which increases in  
19 concentration in an organism by successive additions at  
20 different times or in different ways';

21 And,

22 On page eight, section five, after the words 'No mixing  
23 zones for human health criteria shall be' by striking out  
24 the remainder of subdivision c. and inserting in lieu there-  
25 of the following:

26 'established on a stream which has a seven (7) day, ten  
27 (10) year return frequency of 5 cfs or less.' "

28 (b) The legislative rules filed in the state register on  
29 the twenty-sixth day of July, one thousand nine hundred  
30 ninety-five, authorized under the authority of section six,  
31 article three, chapter twenty-two-c of this code, modified  
32 by the solid waste management board to meet the objec-  
33 tions of the legislative rule-making review committee and

Enr. Com. Sub. for H. B. 4224] 18

34 refiled in the state register on the twenty-sixth day of Oc-  
35 tober, one thousand nine hundred ninety-five, relating to  
36 the solid waste management board (development of com-  
37 prehensive litter and solid waste control plans, 54CSR3),  
38 are authorized.

19 [Enr. Com. Sub. for H. B. 4224

The Joint Committee on Enrolled Bills hereby certifies that the foregoing bill is correctly enrolled.

*Rudy Schooner*  
Chairman Senate Committee

*Rudy Seacrest*  
Chairman House Committee

Originating in the House.

Takes effect from passage.

*Harrell B. Adams*  
Clerk of the Senate

*Bugary M. Gray*  
Clerk of the House of Delegates

*Earl Ray Imboden*  
President of the Senate

*Earl Ray Imboden*  
Speaker of the House of Delegates

The within *as appended* this the *18<sup>th</sup>*  
day of *April*, 1996

*Winston Capriotti*  
Governor

PRESENTED TO THE

GOVERNOR

Date 4/1/96

Time 11:13 AM